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Vol 1, No 2, 2006

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Chiu-Yi (Joy) Lee

Editorial

Articles for the second issue of the Journal of Business Systems, Governance and Ethics were selected with a view to spanning the range of issues covered by the new journal. As described in the first issue, the goal of the journal is to span a number of important areas of business research, and in doing so to offer a different perspective on systems, governance and ethics as they relate to business. This issue has articles on economics, corporate governance, hotel marketing, higher education, the Internet, and teamwork in the workplace. As with the first issue, articles cover both Australia and Asia.

In the first article Doughney puts the proposition that policy discussions about ageing in Australia have for a long time taken for granted the untested proposition that population ageing will create an almost insurmountable economic burden for future generations. The paper then critically evaluates the evidence for this proposition. Next Kripanont outlines research conducted using the Technology Acceptance Model into the uptake of Internet technology by academics in business schools in Thailand. In the third article Fitzgerald, Dadich and Fitzgerald note that despite the potential benefits afforded by teamwork within the workplace, it can be difficult for employers and senior personnel to establish and maintain teams that gel. They go on to investigate how the Instinctive Drive system may offer a method for gauging individual instinctive drives and describe recent quantitative research that affirms that this tool is statistically reliable and valid. An article by Khemthong and Roberts next looks at the adoption of Internet technologies for hotel marketing in Thailand. They consider organisational, technological and environmental factors on the adoption of the Internet and of Web based marketing activities. The final article by Lee investigates how cross-cultural practices affect corporate governance. She suggests that because of increasing global competition and internationalization of world markets, international expatriate assignments are becoming essential to successful worldwide development for many multinational corporations.

This issue of the journal contains articles from both academic staff and students at Victoria University and at the University of Western Sydney. The first issue had only articles from Victoria University, and the Editorial Board looks forward to seeing more contributions from other universities in the near future. All papers in the journal have been subjected to a process of blind peer review by at least two reviewers. Articles were then only accepted after appropriate changes and corrections had been made by the authors.

We hope that you find the content of this issue both interesting and readable.

Arthur Tatnall

Editor

Ageing and the Economy: Time for a Debate Based on Evidence

James Doughney
Victoria University, Australia

Abstract

Policy discussions about ageing have too long taken for granted the untested proposition that population ageing will create an almost insurmountable economic burden for future generations. This paper first outlines the main claims of the 'ageing crisis' literature: ageing reduces labour force participation; increased dependency of non-workers upon workers will reduce future living standards; and future taxpayers will bear the cost of their parents' and grandparents' longevity. The paper then critically evaluates the evidence. Using an original model that combines economic and productivity growth with projected labour force participation rates, the paper concludes that the above claims are, at best, vastly exaggerated. Indeed, on reasonable assumptions, the model suggests that the 'crisis' claims are a furphy.

Introduction

The debate in Australia about ageing and the economy is the social scientific version of a nanoparticle based optothermal nanoconverter.² In physics and chemistry these are called *nanorods*. The past four Commonwealth budgets (2002-5) have put the ageing in prise de position and, last year, the Productivity Commission made it the subject of another magnum opus (PC 2005). Yet the debate itself has been minute – a nanodebate, perhaps. The dominant view is almost taken for granted. Phrases such as 'ageing crisis' are infrequently contested. Worse is that the policy vernacular absorbs them like punctuation. Indeed the debate in Australia about ageing and the economy is a nanorod because nanorods absorb light and raise temperatures: *that is, they generate a lot of heat but do so at the expense of enlightenment!*

Below are two exquisite examples of 'nanorodic' commentary on ageing and the economy. The first is from a 2004 article on the Organisation of Economic Co-operation and Development web site, 'Ageing societies and the looming pension crisis' (OECD 2004):

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If nothing is done quickly to extend working lives, living standards will fall in the course of the coming decades. We know, because of the ageing of our populations, that there will be

¹ Head Work and Economic Policy Research Unit Victoria University, Melbourne. First presented to the Group Training Association, Victoria State Conference, 13 July 2005. I thank participants for their questions and comments. Thanks also to two anonymous reviewers. The usual caveat applies.

² Chou C-H, Chen C-D & Wang CRC (2005). See also Ball (2005).

fewer and fewer persons of working age to support more and more older people ... The first step governments can take is to eliminate provisions that subsidise early withdrawal from active life ... Without reform, and without a change in attitude, it will be our children and grandchildren who will pay the price.

The second truly beggars belief. It is from an article by Philip York in the May 2004 *New Observer* magazine titled 'The retirement crunch: Older, poorer and unsustainable':

Governments around the world are in crisis as pension and healthcare costs are increasing exponentially and, if governments are in crisis, citizens are in crisis. Tough decisions need to be made especially when it comes to healthcare, but at present few are prepared to make them because of the ethical and moral implications. Spiralling healthcare costs alone threaten to cripple the richest nations as doctors, patients, and their loved ones especially, seem to consider death almost optional as lives are extended (sometimes for only days) at enormous expense...' (York 2004, p. 33; emphasis added)

Of course, professionals and patients' families make difficult decisions daily in hospitals, and these decisions are related both to patients' needs and the resources available to prolong and save lives. However, once we start making those decisions according unsubstantiated and rhetorical claims of an 'ageing crisis', ageing people will be in serious trouble. Phrases like 'cripple', 'exponentially', 'governments are in crisis, citizens are in crisis', 'spiralling healthcare costs' and 'tough decisions need to be made' unfortunately make good sound grabs. Prime Minister John Howard's 2002 claim that Australia's suffers from a 'cult' of early retirement is another example. They become threads in the fabric of public discourse and, even if false, exert an almost subliminal influence.

In this paper I therefore hope to expose not only the more flamboyant claims about ageing and the economy but also the more reasoned of the dominant contributions. The best way to clarify the problem is to expose such contributions to evidence and reasonable argument. Below are the essential claims in the dominant literature, and I will deal with each in turn in the following sections:

1. Population ageing reduces labour force participation:
 - Early retirement has cut labour force participation among older workers.
 - Lower labour force participation will increase the dependency ratio significantly.
2. An increased dependency ratio will 'reduce' average living standards in the future:
 - Average living standards will fall absolutely.
 - Average living standards will fall relatively.
3. The cost of an ageing population will be born by taxpayers inter-generationally:
 - Our children and grandchildren will experience higher taxes and or inferior government services.

The background arguments in this paper will help us to discuss more important problems, such as skills shortages and skills formation in Australia, with greater clarity. They will do so by explaining that population ageing is not such an economic problem after all. Attention should be diverted to skills, education and making older workers and retirees feel valued, in part for their skills. They, we, must not feel like a burden on society.

Ageing, labour force participation and dependency ratios

The claim that population ageing reduces labour force participation is almost a truism in current circumstances. The average or aggregate participation rate is defined as the percentage of the civilian population aged 15 and older that is either employed or seeking employment (i.e. in the labour force). As women have had fewer children and life expectancy has increased, the average age of the population

has grown. This also means that there are proportionately more people in the older age groups (cohorts), including retiree cohorts. The average participation rate is bound to fall if such trends continue. Table 1 gives some of the relevant data and estimates.

Table 1 Australia's population, historical trends and predictions 1947-2051

	1947	1971	2005	2021 ^(a)	2051 ^(a)
<i>Total population</i>	3,773,800	7,579,400	20,328,600	19,662,800	23,368,400
<i>Total fertility rate</i>	3.08	2.94	1.77	1.7	1.7
<i>Life expectancy - female</i>	70.6	74.5	82.8	86.0	87.7
<i>Life expectancy - male</i>	66.1	67.8	77.8	81.7	84.2
<i>Median age</i>	30.7	27.5	36.6	40.7	45.2
<i>Not in labour force to labour force ratio</i>	1.38	1.33	0.98	1.05	1.26
<i>Average or aggregate labour force participation rate</i>	1949-50 avg. 58.0% (b)	August 61.0% (b)	August 64.8%	2024-25 59.9% (c)	2044-45 56.3% (c)
<i>Age cohort</i>	<i>Proportion of population in key age cohorts (%)</i>				
<i>0-14</i>	25.1	28.7	19.6	16.9	15.1
<i>15-64</i>	66.8	63	67.3	64.3	59.1
<i>65-84</i>	7.7	7.8	11.6	16.3	20.0
<i>85 and older</i>	0.4	0.5	1.5	2.4	5.8
<i>Total (rounded)</i>	100.0	100.0	100.0	100.0	100.0

(a) Series B, mid-range projections (ABS 2005b, 3222 0)

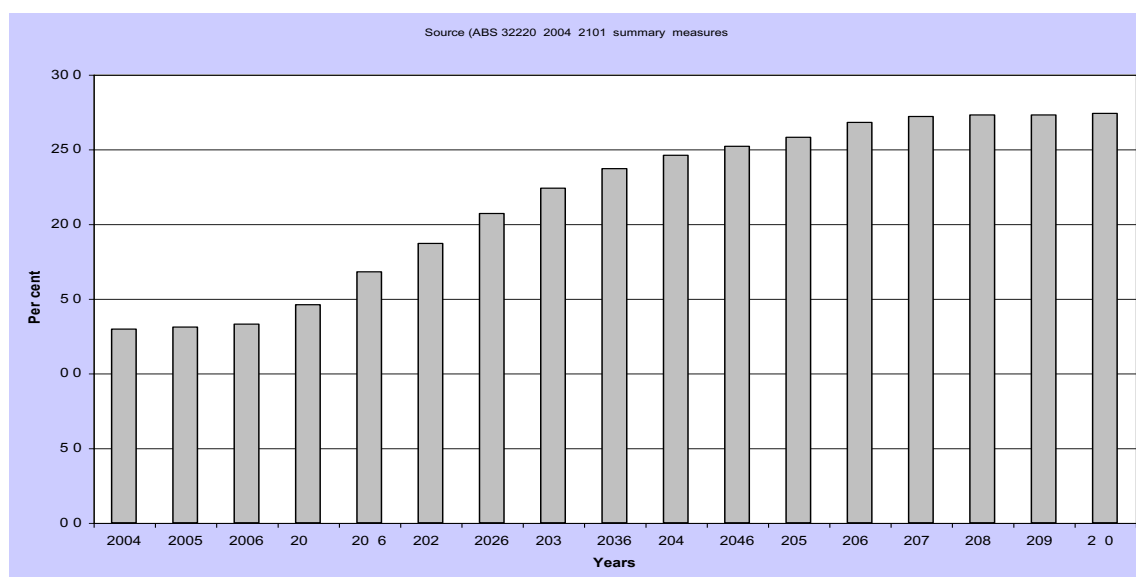
(b) Reserve Bank of Australia (RBA), Australian economic statistics, historical data, table 4 3 http://www.rba.gov.au/Statistics/op8_index.html#section4

(c) Productivity Commission estimates (PC 2005, p 84 table 3 2)

Sources (all other): ABS (2006, 1301 0; 2005a, 3101 0; 2004, 3105 0 65 001; 2005b, 3222 0)

No one disputes that the population is ageing or, other things being equal, that the aggregate Australian participation rate will decline. Data such as those in table 1 are unambiguous. Chart 1 contains a view over time of the proportion of the population that is aged 65 and older. The dispute rather turns on the significance of these data and projections and on the various associated claims the data are used to support. One associated claim is that of the 'cult' of early retirement (Howard 2002). Let us deal with the question of early retirement first. Chart 2 refutes the claim, and chart 3 explains why. When we look at the relevant older-age cohorts we see that participation in the labour force has actually increased. The reason is that women's participation has grown dramatically in aggregate and in all cohorts.

Chart 1 Proportion of Australian population aged 65 and older persons 1950-2051



Sources: ABS (2005, 1301.0; 2004a, 3101.0; 2004b, 3105.0.65.001; 2003, 3222.0)

Both the increase in women's labour force participation and the gap remaining between men's and women's rates have potential regarding Australia's skill requirements. Yet women comprise about one in ten construction workers but almost eight in ten workers in health and community services and seven in ten in education. Women likewise make up fewer than one in four managers-administrators and one in ten workers in trades and related areas (Doughney et al. 2003).

Now when we examine the aggregate participation rate more closely it is easy to see that it is similar to another ratio called the dependency ratio. The dependency ratio can be measured a number of ways, but table 1 uses the ratio of the population not in the labour force (children and retirees) to the labour force. The idea is to grasp the extent to which the economically active population is supporting those who are not. While it is clear that the dependency ratio will rise for the same reasons that the participation rate will fall, it is important to put its rise into perspective. This will help us in turn to assess its significance.

Chart 2 Average or aggregate participation rates Australia persons 1978-2003

Sources: ABS (2005, 1301.0; 2004a, 3101.0; 2004b, 3105.0.65.001; 2003, 3222.0)

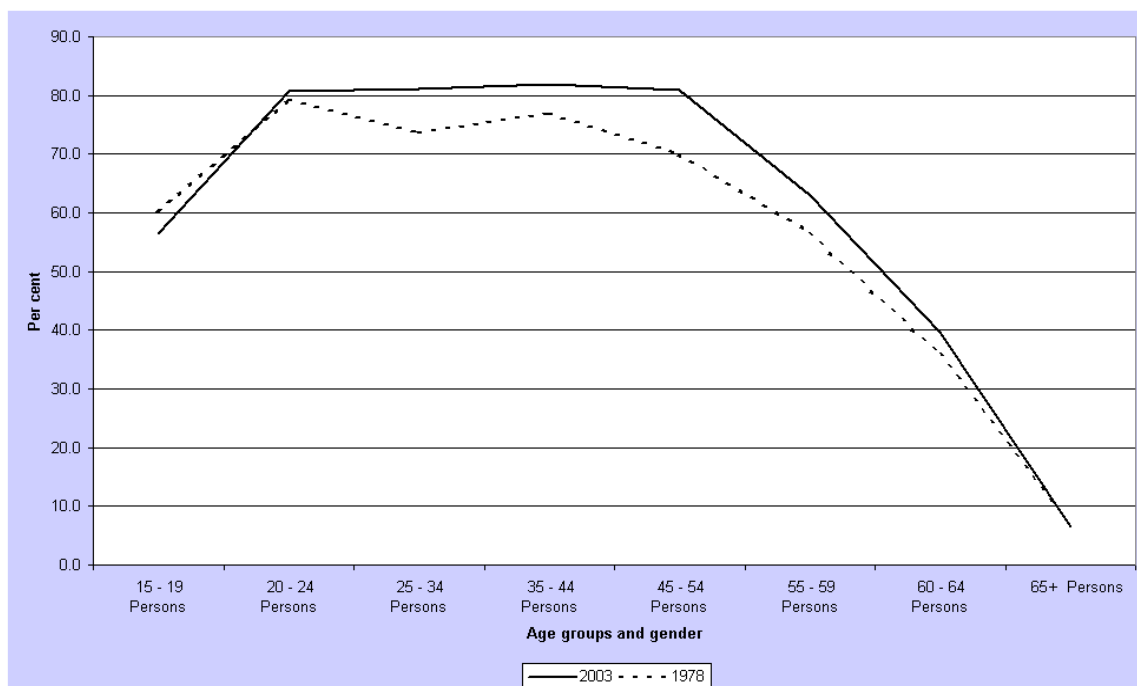


Table 1 demonstrates that those who see danger in a higher dependency ratio will have to argue a case. That is, by putting the ratio into perspective, it is possible and appropriate to ask 'what is so significant about an increase such as this?' The current dependency ratio is low by historical standards. A labour force member on average supports one person who is not in the labour force at present. In the immediate post world war 2 years the ratio was about one to 1.38 not in the labour force. It is projected to rise to about one to 1.25 by the middle of this century. In fact by the middle of this century it will be declining again, as chart 4 indicates.³

This section of the paper then has answered the first set of claims presented in the dominant ageing literature. It is easy enough to see from the data alone, with little additional argumentation, that:

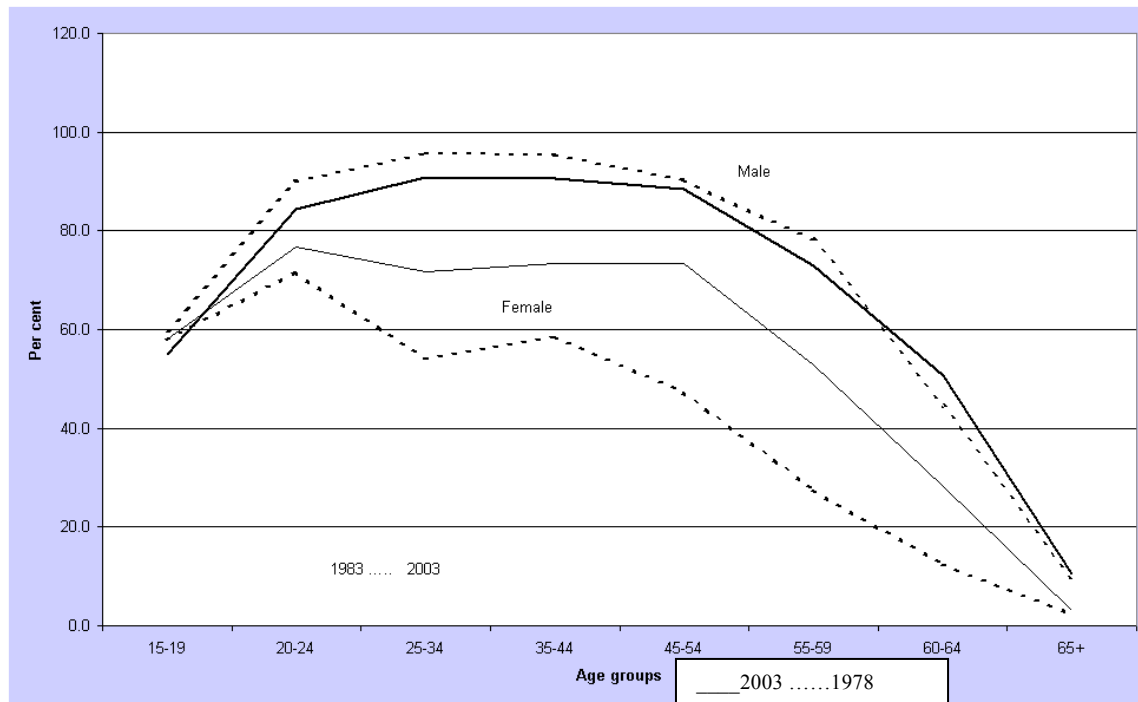
While population ageing has and will reduce *aggregate* labour force participation rates:

- a. Early retirement has *not* cut labour force participation among older workers. Rather older cohort participation rates have been *increasing* because of increased female participation. This trend should continue.

³ All charts and tables use Australian Bureau of Statistics Series B, mid-range population projections (ABS 2003, 3222.0).

- b. Lower *aggregate* labour force participation rates and the dependency ratio are very similar ratios and change over time for much the same reasons. The data by themselves do *not* demonstrate that the dependency ratio's projected rise is significant.

Chart 3 Average or aggregate participation rates Australia by gender 1978-2003

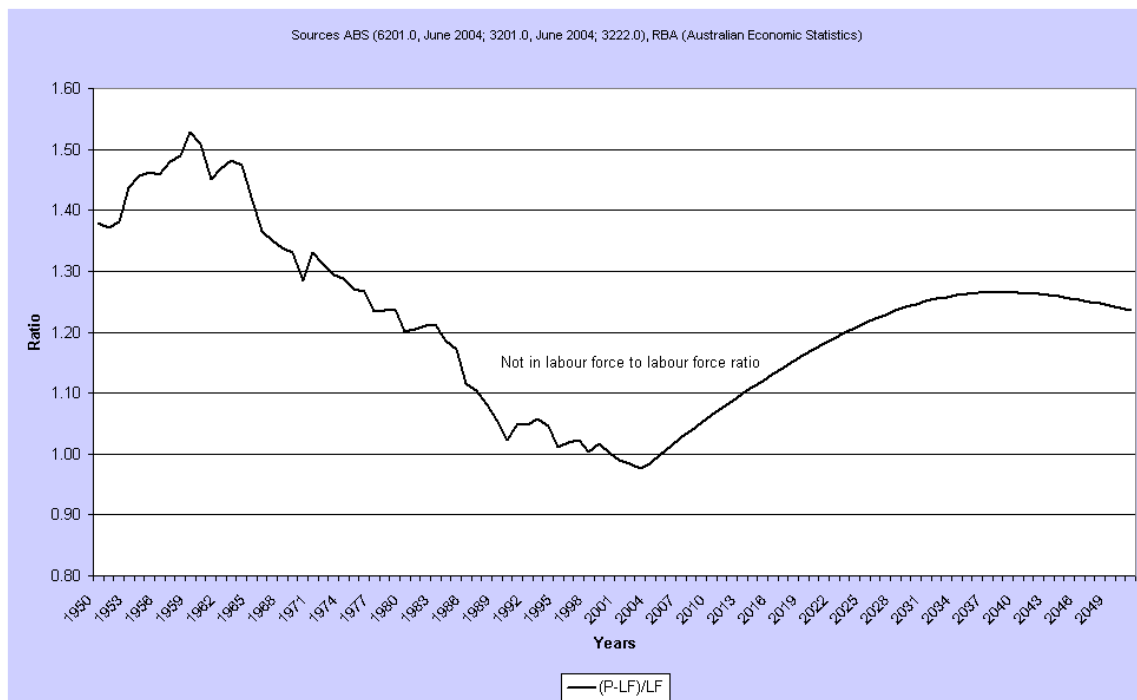


Sources: ABS (2005, 1301.0; 2004a, 3101.0; 2004b, 3105.0.65.001; 2003, 3222.0)

It is curious therefore that one of the more reasoned official contributions, that by the Productivity Commission (PC 2005), should focus in its overview on the aggregate participation rate. Its key point summary emphasises that 'overall participation rates are projected to drop from around 63.5 per cent in 2003-04 to 56.3 per cent by 2044-45' (PC 2005, p. xii). The summary does nothing to set these figures in perspective. Fortunately the body of the PC's report is subtler. However, the commission is well aware that its key point summaries go into its media releases other sharper documents. The key points contain the stress the commission wishes to convey. While not alarmist this key point, at least, is not enlightening. It quite easily coexists with the various 'nanorodic' interpretations.

Population ageing and the future for living standards

The crude inference from increasing dependency ratios and the falling aggregate labour force participation is that living standards of future generations will fall absolutely. A subtler version is that living standards will fall relatively. Both are wrong. The crude version means that future generations will be worse off in real terms than we are today. The subtler version has it that future generations will be worse off 'counterfactually'. That is, they will have lower real living standards than they would have had save for population ageing. The apparatus needed to refute the crude version is easy to assemble and to understand. I will set it out first and then perform some calculations. These will be sufficient also to refute the subtler 'relative' version of the 'our children and grandchildren ... will pay the price' thesis.

Chart 4 Actual and projected 'dependency ratio' Australia 1950-2051

A workable proxy for living standards in this context is gross domestic product (GDP) per head of population (P). Gross domestic product per capita is therefore the ratio (GDP/P). This ratio can be broken down further, or decomposed, as follows:

$$(GDP/P) = (GDP/L) / (P/L)$$

The ratio (GDP/L) is a proxy for labour productivity: in this case output per member of the labour force (L). The change in this ratio closely follows more usual labour productivity measures, namely output per employee or output per labour hour. It is sufficiently accurate for our purposes. Similarly the ratio (P/L) is a sufficiently accurate proxy for the dependency ratio used above, which in symbols is $[(P - L)/L]$, or the ratio of the numbers of those not in the labour force to those in the labour force.

Now a property of compound rates of growth or growth percentages in an equation like that above is that they are approximately additive when increases are relatively small. That is, the annual percentage growth rate in (GDP/L) less the annual percentage growth rate in (P/L) will equal the annual percentage growth rate in (GDP/P). In symbols this can be represented as follows:

$$(GDP/P)^* \approx (GDP/L)^* - (P/L)^*$$

In words we can say that the annual percentage growth in living standards, or GDP per capita, will be approximately equal to the annual percentage increase in labour productivity less the annual percentage increase in the dependency ratio. Thus if productivity grows at 2 per cent per annum and the dependency ratio does likewise then living standards will not rise. Said in this way the apparatus is intuitively obvious. The PC adopts a reasonably similar approach in parts of its report (PC 2005, p. 52).

If we use more realistic projections, what will be the likely estimated effect on living standards of population ageing out to 2051? This is the year used in the ABS population projections. I claim no more than that the data in table 2 below are 'what if' results based on reasonable inputs. First I will use a labour productivity growth figure common to the 2003 Commonwealth budget *Intergenerational Report* and to the PC's 2005 report. This is an average annual labour productivity growth rate of 1.75 per cent.

I will also assume, conservatively, that the cohort participation rates existing in 2003 will be the same in 2052. This is conservative for two reasons. Women's labour force participation will increase in all cohorts, with a possible exception of the 15-24 age group. This is because of increased educational participation. It is also reasonable to think that older workers will continue the trend to remain at work longer. Greater longevity and correspondingly better health will accentuate the trend. Nonetheless the conservative assumption delivers an average annual growth rate in the dependency ratio of 0.26 per cent.

Using the equation above these growth rates mean that GDP per capita will grow to 2051 at the rate of 1.49 per cent per year. GDP will grow at a modest rate of 2.1 per cent per annum. Living standards will, therefore, not only *not* fall, but they will grow in real terms. How much will living standards grow according to this conservative 'what if' scenario? Table 2 contains the dollar figures (in constant 2003 dollars). It shows that GDP per capita would more than double from 2003 to 2051.

I could offer other less conservative scenarios, but there would be little point. The data here are sufficient to refute fully the absolute version 'children and grand children will pay the price' thesis. More conservative scenarios would have to verge on the absurd to begin to dent the results, but they still would not alter the outcomes fundamentally. Our children and grandchildren have little to fear. They will live about twice as well in real dollar terms as we do. The PC says much the same in the body of its report (see e.g. 2005, p. xxvii), but it elides this conclusion in its key points summary, preferring again to stress that:

Assuming the average labour productivity performance of the past 30 years, per capita GDP growth will slump to 1.25 per cent per year by the mid 2020s, half its rate in 2003-04. (2005, p. xii)

Table 2 Conservative estimate of ageing impact Australia 2003-2051 with 2003 participation rates prevailing in 2051

<i>Description</i>	<i>Symbol</i>	<i>Actual to or at June 2003</i>	<i>ABS Series B 2051</i>
<i>Total GDP or income \$m</i>	GDP	738,812	1,995,334
<i>Total labour force</i>	L	10,063,327	11,818,742
<i>Total population</i>	P	19,881,469	26,421,541
<i>'Productivity' \$</i>	GDP/L	73,416	168,828
<i>Per capita GDP \$</i>	GDP/P	37,161	75,519
<i>'Dependency' ratio (1)</i>	(P-L)/L	0.98	1.24
<i>'Dependency' ratio (2)</i>	P/L	1.98	2.24

Sources ABS (6201.0, June 2004; 3201.0, June 2004), RBA (Australian economic statistics). All 2003 constant (chain value) dollars. Series B, mid-range population projections (ABS 2003, 3222.0).

The commission also neglects to note in its selective key points summary that, by its own reckoning, per capita GDP growth will be greater than 1.6 per cent per annum by the 2040s. Would this be to boom rather than to slump? Use of pejoratives can be telling. Again it is a case of more heat than light.

What can we make of the hypothetical argument that future generations will be relatively worse off? Does this argument have traction? It is a curious way of posing the argument, and it does not have traction in reality. Relative to living standards today, and in each of the years up to 2051, each successive 'generation' should be better off in real terms. That is what average annual growth in GDP per capita means, provided it is maintained year on year. Whether the figure is an average of 1.5 per cent, 1.25 per cent or whatever, the next year's population will be better off, if only in real dollar terms. They might become sadder, less enlightened and spiritually deflated, but they will, on average, have more in their pockets. In fact they will have double the real incomes in 2051 that we have now.

The only senses in which future generations might be relatively worse off would be to compare them with their successors or against an external standard. The PC's report does in fact use a counterfactual standard in which the Australian population does not age (2005, p. xvii). It compares estimated actual GDP per capita growth against rates that might prevail were the population not to age. Comparing counterfactuals can be a useful exercise. For example, we might compare the relative impacts of government investments in infrastructure against corresponding tax cuts. However, it is not as if we can choose *not* to have an ageing population. Therefore the PC's exercise is not really very meaningful. Moreover, while the PC does not use words like 'relatively worse off', its comparison tends to be pejorative precisely in this sense. (See the section titled 'Future economic growth – An age of diminished expectations?' in the report overview and chapter 5.)

This section of the paper has answered the second set of claims presented in the dominant ageing literature. The model used here has allowed us to see, using relatively straightforward arguments and reasonable projections, that:

An increased dependency ratio will *not* 'reduce' average living standards in the future. In fact:

- c. Average living standards will rise absolutely, on conservative assumptions by about double their real 2003 dollar amounts.
- d. Moreover, the argument that average living standards will fall relatively is meaningless because:
 - (a) the population will age regardless and (b) absolute living standards will about double in 2003 real dollar terms regardless.

In the next section I will discuss what I believe is the true motive behind the dominant positions on ageing and the economy. This is that an ageing population will increase the need for government spending. Those of neo-liberal or economic rationalist bent find this prospect anathema.

The effect of ageing on government spending and living standards

We saw in the introduction that the role of government is never far from the centre of economic policy discussions. As Philip York put it: 'Governments around the world are in crisis as pension and healthcare costs are increasing exponentially and, if governments are in crisis, citizens are in crisis.' (2004, p. 33). York happens to represent QBL Funds management, and his remedy (apart from making death less 'optional') is that:

The government needs us to become more self sufficient, more self funding. The pension system has to be seen mainly as a poverty prevention mechanism, as opposed to an income replacement. Personally funded superannuation needs to be seen as the main pillar of aged income support. (2004, p. 33)

The message of the PC and others of a similarly more serious ilk is again subtler. Yet their argument is essentially the same. Unless various policy measures are implemented soon the cost of an ageing population will be born inter-generationally by future taxpayers. They will experience higher taxes and or inferior government services. This is what the PC says in its key points summary:

- While taxation revenue will largely track GDP growth, government expenditure is likely to rise more rapidly, placing budgets under considerable pressure.
 - Although education and some welfare payments are projected to increase more slowly than GDP, government spending on health, aged care and pensions will grow at a faster rate.
 - The major source of budgetary pressure is health care costs, which are projected to rise by about 4.5 percentage points of GDP by 2044-45, with ageing accounting for nearly one-half of this.

- In the absence of policy responses, the aggregate fiscal gap will be around 6.4 percentage points of GDP by 2044-45, with an accumulated value over the forty years of around \$2200 billion in 2002-03 prices.
 - On past trends, much of this could be expected to be borne by the Australian Government, but there are significant potential burdens faced by State and Territory Governments.
- A range of policy measures will be needed to reduce the fiscal pressure from ageing and/or to finance the fiscal gap. (2005, p. xvii; original formatting)

This summary is greatly exaggerated and selective. It lacks perspective and comes from an implicit understanding that an increase in of the role of government in the economy is bad per se. Why else would the PC focus on a 40-year accumulated figure (\$2200 billion) if not to shock? Fortunately it is relatively easy to clarify the issues with the help of a simple growth model.

How large is the supposed fiscal ‘burden’? Per capita GDP, as a proxy for living standards, is a reasonable variable to start with. The aim of the model is to show how general government taxation and spending redistributes average GDP per person (GDP/P) as the ratio of general government spending to population (G/P) rises or falls. This ratio will, other things being equal, rise or fall with the dependency ratio. The model is:

$$(G/GDP)^* \approx (G/P)^* - (GDP/P)^*$$

That is, the annual compound percentage growth in the proportion of general government spending to GDP $(G/GDP)^*$ will approximately equal the annual compound percentage growth in the ratio of government spending to the population less that in per capita GDP. We can also insert the terms of the model used in the previous section into this equation:

$$(G/GDP)^* \approx (G/P)^* - (GDP/L)^* + (P/L)^*$$

In other words government spending as a proportion of GDP will rise with increases in the rates of growth of government spending per person and the dependency ratio and fall with the rate of growth of labour productivity. If we imagine conservatively that the ratio of government spending to GDP rises at the rate of 2 per cent per annum – a rate higher than the rate of growth of the proportion of the population older than 65 – we can use the earlier data to estimate what might happen to living standards. That is, we can use the annual 1.75 per cent productivity and 0.26 per cent dependency ratio growth figures. Table 3 presents the 2003 real dollar figures.

The data in table 3 give us the rise in the proportion of government spending and taxation of about 6.0 per cent to 2051 that the PC estimates. However, two points need to be made. The first is that the assumptions are very conservative. GDP would grow only by 2.1 per cent per annum on this scenario. By way of comparison, it has averaged about 3.5 per cent per annum over the past 40 years. The second is one that is conveniently ignored, namely that after tax PAYG tax payers still receive more than doubled incomes even if they pay all the tax required to meet the ‘fiscal burden’, ‘fiscal challenge’ or whatever other name the proponents of nanorodic ageing crisis thinking want to give it.

To be blunt, the whole thing is a furphy. Economics should be about living standards not ratios. If the ratio of government spending rises because our population ages, so what? Isn’t it good that our economy can adapt in this way to human needs? Isn’t this better than having human needs adapt to a preconceived ratio? It is perhaps a cheap shot but, if we begin to think in the manner of a Philip York, we end up talking about the optionality or not of death! In short:

The ‘cost’ of an ageing population can be readily accommodated inter-generationally by taxpayers:

- Our children and grandchildren will experience higher taxes, but their real take-home incomes will still more than double. Only someone obsessed with the neo-liberal mantra of small government (or someone fixated on ratios) would think this a ‘burden’.

Table 3 Estimate of ‘fiscal challenge’ in Australia 2003-2051 with 2003 participation rates in 2051

Description	Actual to or	ABS
	at June 2003	Series B 2051
Growth in per capita government spending per annum (G/P)*		2.0%
Less Growth in per capita GDP per annum (GDP/P)*		1.5%
Growth in General government spending to GDP (G/GDP)* per annum		0.5%
Per capita GDP (GDP/P) \$	37,161	75,519
Per capita government spending (G/P) \$	7,734	20,008
General government spending to GDP (G/GDP) %	20.8	26.5
Average annual labour earnings (W/L) \$	37,869	87,084
Government spending to labour (G/L) \$	15,279	44,729
Change in G/L due to change in G/P ratio \$	n.a.	5634
W/L with change in G/L fully allocated to PAYG (i.e. pre-tax W/L less tax increase due to ageing)	37,869	81,884

Sources: ABS (2004c, 6201.0; 2004a, 3101.0; 2004b, 3105.0.65.001; 2003, 3222.0), RBA 2004 (Australian economic statistics). All 2003 constant (chain value) dollars.

Conclusion

The data and relatively simple arguments in this paper have established the conclusions below. The dominant view on the subject, namely that ageing will create economic problems if not a crisis, is plainly false. If our approach is not selective and its perspective is broad such conclusions as the following are inescapable:

1. While population ageing has and will reduce *aggregate* labour force participation rates:
 - 1.1. Early retirement has *not* cut labour force participation among older workers. Rather older cohort participation rates have been *increasing* because of increased female participation. This trend should continue.
 - 1.2. Lower *aggregate* labour force participation rates and the dependency ratio are very similar ratios and change over time for much the same reasons. The data by themselves do *not* demonstrate that the dependency ratio's projected rise is significant.
2. An increased dependency ratio will *not* ‘reduce’ average living standards in the future. In fact:
 - a. Average living standards will *rise* absolutely, on conservative assumptions by about double their real 2003 dollar amounts.
 - b. Moreover, the argument that average living standards will fall relatively is meaningless because: (a) the population will age regardless and (b) absolute living standards will about double in 2003 real dollar terms regardless.
3. The ‘cost’ of an ageing population can be readily accommodated intergenerationally by taxpayers:
 - c. Our children and grandchildren will experience higher taxes, but their real take-home incomes will still more than double. Only someone obsessed with the neo-liberal mantra of small government (or someone fixated on ratios) would think this a ‘burden’.

The background arguments in this paper will help us to discuss more important problems, such as skills shortages and skills formation in Australia, with greater clarity. They will do so by explaining that population ageing is not such an economic problem after all. Attention should be diverted to skills, education and making older workers and retirees feel valued, in part for their skills. As a society we must not make older workers and retirees feel like they are a burden. They are our parents and

grandparents. They are we. A flourishing life, at whatever age, is their due. It is our due, just as it is our children's and grandchildren's.

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Using a Technology Acceptance Model To Investigate Academic Acceptance of the Internet

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Abstract

Information Technology has long been a well-known research area, but this changed considerably when the Internet became prominent just over a decade ago. Many researchers have studied and proposed theories and models of Technology Acceptance in order to predict and explain user behaviour with technology to account for rapid change in both technologies themselves and their environments. Each theory or model has been proposed with different sets of determinants and moderators. More importantly, most of the research has been conducted in the U.S. Therefore, it is questioned whether the technology acceptance models and theories that have been developed, modified, and extended in the U.S. can be used in other regions such as South East Asia and more specifically in Thailand. It is questioned whether there might be other determinants and moderators that also play important roles in this specific environment. This research study has seven objectives, of which five have already been achieved. From the findings, despite the fact that academics hardly used the Internet (used a few times a month) for teaching in class and providing a personal Web-Base for facilitating teaching, they intended to use it more (a few times a week) in the future. On the contrary, at the time of the survey, they used the Internet rather often (five to six times a week) for enhancing teaching knowledge, searching information for their research, personal tasks, enhancing personal knowledge, and using email for personal contact. Significantly, no matter how often they currently used the Internet, they all intended to use the Internet more often in all type of tasks in the future. With respect to motivation to make full use of the Internet in their work, they not only 'quite agree' that if good facilities were available to support usage (e.g. good computer hardware and software, good communication network etc.) this would motivate them, but they also thought that their strong intentions for providing student contacts, the university's policy to be Research Oriented and become an e-University in the future, also play an important role in motivating them to make full use of the Internet in their work. On the contrary, the availability of technicians and Internet training motivated them less. They also thought that using the Internet helped improve their professional practice (such as teaching in class, preparing teaching materials, research, and administrative tasks), and helped improve personal developments (such as improving their academic and personal knowledge) and helped improve their quality of working life (such as saving their expense e.g. searching Information from e-Journal and Websites and using email in communication with others). Nevertheless, in respect of improving quality of working life and helping them have more time for leisure and creative thinking, they simply 'slightly agreed'. With these findings, it is interesting to investigate deeply about academics' behaviour and intention. Five core constructs (determinants) were examined including perceived usefulness, perceived

ease of use, social influence, self-efficacy, and facilitating conditions together with moderators such as gender, age, experience, and some cultural aspects of whether these constructs influenced academic's behaviour. Survey research methodology (questionnaire and semi-structured interviews) were used to collect primary data from Business Schools in Thailand, and the survey yielded 455

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usable questionnaires. Structural Equation Modelling with AMOS is also being used to analyse data and is expected to provide evidence to generate the Technology Acceptance Model that is both substantively meaningful and statistically well-fitting (Byrne 2001, 2006). By generating the Technology Acceptance Model in accordance with the main research objectives, it is expected that the generated research model will have the power to explain/predict Internet acceptance and usage behaviour. A thorough understanding of the model may help practitioners to analyse the reasons for resistance toward the technology and would also help to take efficient measures to improve user acceptance and usage of the technology (Davis, 1989).

Keywords

Internet, Information Technology, Academic, Academic' work and Culture

Introduction

In the Information Systems field, an important area of research is concentrated on technology acceptance. Many theories and models have been developed, but one of the most well-known theories/models in the U.S is the Technology Acceptance Model (TAM) (Davis, 1989; Davis, Bagozzi & Warshaw 1989), introduced more than a decade ago. Despite its popularity and usefulness, many researchers still want to investigate whether TAM should be revised, extended or modified to account for rapid change in both technologies and their environments. Previous research studied what determinants might be significant in affecting behaviour intention and actual behaviour in specific contexts including technology, individual, and organizational. It is questioned whether there are only determinants such as perceive usefulness, perceived ease of use, subjective norm, perceived behaviour control and moderators such as age, gender, experience, voluntariness to determine behaviour intention and actual behaviour. Perhaps there could be some other determinants and moderators that also play important roles. More importantly, much of the research has been conducted in the U.S. and it is wondered whether technology acceptance models that have been developed, modified, and extended in U.S. can be used in other regions like South East Asia and especially in Thailand.

The purpose of this study is to develop the Technology Acceptance Model that will have the power to demonstrate acceptance and actual behaviour (usage) of the Internet¹ by using academics² within Business Schools in the Thai Public University Sector as subjects. A thorough understanding of the model may help practitioners to analyse the reasons for resistance toward the technology and would also help to take efficient measures to improve user acceptance/usage of the technology. According to Davis (1989) practitioners evaluate systems for two purposes, one is to predict acceptability, the other is to diagnose the reasons resulting in lack of acceptance and to take proper measures to improve user acceptance. The purpose of this study is in developing the following specific research objectives.

1. To review literature in respect of user acceptance/usage theories and models and examine prominent models including Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Decomposed Theory of Planned Behaviour (DTPB), Social Cognitive Theory (SCT), Technology Acceptance Model (TAM), TAM2, Augmented TAM or Combined TAM and TPB (C-TAM-TPB), The Unified Theory of Acceptance and Use of Technology (UTAUT) and a Model of the Innovation-Decision Process .
2. To review previous literature about IT acceptance/adoption and usage within four contexts of study include technology, individual, organisational, and cultural contexts by concentrating on the examining of determinants, moderators, and cultural aspects that may influence user behaviours.

¹ The Internet is a publicly available computer network consisting of a worldwide network of computer networks that use the TCP/IP network protocols to facilitate data transmission and exchange, its synonyms are cyberspace and Net (Online-Dictionary 2006).

² Academic is a full-time member of the instructional staff of a university and may mean, or be used interchangeably with the word 'teacher', 'lecturer', 'instructor', or 'faculty member'.

3. To investigate the extent to which academics use and intend to use the Internet in their work³.
4. To investigate how to motivate academics to make full use of the Internet in their work.
5. To investigate to what extent using the Internet help improving academics' professional practices, professional developments and quality of working life.
6. To formulate a Technology Acceptance Model of Internet usage by Thai academics.
7. To generate and validate a research model that best describes Thai academics' Internet usage behaviour and behaviour intention.

Theoretical Base and Context of Study

This research is based on many well-known theories/models including Theory of Reasoned Action (TRA) (Fishbein & Ajzen 1975), Theory of Planned Behaviour (TPB) (Ajzen 1991), Decomposed Theory of Planned Behaviour (DTPB) (Taylor, S & Todd, PA 1995), Social Cognitive Theory (SCT) (Bandura 1986), Technology Acceptance Model (TAM) (Davis, 1989; Davis, Bagozzi & Warshaw 1989) (includes its extensions and modifications), TAM2 (Venkatesh, Viswanath & Davis 2000), Augmented TAM or Combined TAM and TPB (C-TAM-TPB) (Taylor, S & Todd, P 1995), The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Viswanath et al. 2003), and a Model of the Innovation-Decision Process (Rogers, 1995; Rogers1983). The aim of this research differs from existing theories/models/practices in that it will concentrate within four specific contexts according to (Han 2003):

1. Technology context (the Internet) circles the target of individual technology acceptance/usage behaviour,
2. The individual context (academics) defines the micro-environment,
3. The organisational context (Business Schools in the Thai Public University Sector) is in the middle,
4. The cultural context (Thai cultural context) serves as the macro-environment.

It is important to comprehensively understand these contexts and their effects on user behaviour towards a given technology in order to develop a model of technology acceptance that best describes user behaviour and behaviour intention. The interpretation of a Technology Acceptance Model of Internet usage from these contexts will provide a solid base to explain user behaviours and behaviour intention, and what *promotes* and *hinders* usage in a specific environment.

Technology Context

As we live in the information age, the major concern of Information Technology is the use of computers to convert data into useful information in making decisions (Tatnall et al. 2003). The more useful information we get the better the decision making. Because of this, it is worth studying individual reactions to use of information technology and other technologies. These technologies can help people not only in good communication with others but also help providing useful information for decision making in accordance with peoples needs. Previous research studied different technologies in order to develop or extend models or theories of technology acceptance and usage. Examples of technologies under investigation in previous research are: software packages (Davis, F. D., Bagozzi & Warshaw 1989; Venkatesh, Viswanath & Davis 1996), microcomputers (Igbaria, Magid, Guimaraes & Davis 1995), e-mail (Gefen & Straub 1997; Szajna 1996), telemedicine technology (Hu, P. J. et al. 1999) and WWW (Agarwal & Karahanna 2000). The Internet is the Technology under investigation for this

³ Academic' work relates to teaching and teaching related tasks within the University such as teaching in classes, providing a Personal Web-base for facilitating teaching, preparing teaching materials, writing teaching documents or texts, etc Moreover, academic' work also covers research and administration tasks, for example (Rosenfeld, Reynolds & Bukatko 1992).

research because of its popularity and usefulness. The Internet (sometimes known as the Information Super Highway or Infobahn) is an interconnected network of networks (Tatnall et al. 2003). The Internet is so popular since it can help connect millions of computers and millions of users around the world, by providing so many interesting services with less expense. The most common services of the Internet are the Web and e-mail (Davison, Burgess & Tatnall 2003, 2004). Although the Web offers many facilities but many organisations also make use of Web portals (Tatnall et al. 2003), that aggregate information from multiple sources and make that information available to various users (Tatnall 2005). The other services on the Internet are for example, Usenet, Newsgroups, File sharing, and Gopher (WordIQ 2006).

At present and in the future, the Internet seems to be the most useful technology for communication and for obtaining information for business organisations and educational institutions. Even though the Internet became popular only about a decade ago (Hyperdictionary 2006), it is now very popular in many countries and especially in the U.S. Despite its popularity, the Internet penetration rate of the world (percentage of the population that use the Internet) is still very low. Only 15.7% of all people in the world use the Internet. This accounts for 1,022.9 million people from a total population of 6,499.7 million (*Internet Usage Statistics-The Big Picture* 2006). This statistics shows that many people in many countries still have no opportunity to access the Internet. In Thailand the penetration rate (12.7 %) is lower than the average penetration rate of the world (15.7 %). It cannot be compared with the penetration rate of the U.S. (68.6 %) (*Internet Usage Statistics for the Americas* 2006) and Australia (68.4%) (*Internet Usage and population in Oceania* 2006). The total population of Thailand is 66.6 million, and Internet users make up only 8.4 million people (*Internet Usage for Asia* 2006). Undoubtedly, there are questions in respect of the gap between popularity together with usefulness of the Internet and the penetration rates of this technology. The very low Internet penetration rates in these countries may represent many problems. If Internet technologies are available in these countries via infrastructures, further questions that should be addressed are what determinants influence them to use the Internet and moreover, how to motivate people to make full use of this technology in their work.

Individual and Organisational Contexts

The Thai Government acknowledges the significance of educating the Thai people, as seen by its policies such as IT 2010(*Education in Thailand* 2004) to support and increase Internet usage within schools and higher education institutions. Unfortunately, the Internet usage rate is still very low compared with other countries within the South East Asia region such as Singapore and Malaysia (their Internet penetration rates are 67.2% and 36.7% respectively) (*Internet Usage for Asia* 2006). Therefore, investigating Internet usage behaviours by academics at higher education institutions seems to be worth doing since they are very important human resources in the country. Their higher qualifications and their knowledge/visions directly affect their work, and consequently affect the quality of students graduated from the universities. In turn, the qualification of students who graduate from these Universities or Business Schools also affect the quality of their work in the workplace within business or other environments in Thailand. If Internet usage can be promoted, it will certainly partly help Thailand to cope with the rapidly changing environments in this Information age.

As individual academics were used as subjects of this study this will help to clarify the importance of individual characteristics in determining usage behaviour (Han 2003). Previous research has studied many other types of subjects, for example, undergraduate and graduate business students (Agarwal & Karahanna 2000; Szajna 1996; Taylor, S & Todd, P 1995; Taylor, S & Todd, PA 1995), MBA students (Agarwal & Prasad 1998; Davis, 1989; Davis, Bagozzi & Warshaw 1989; Igarria, Magid, Guimaraes & Davis 1995; Venkatesh, Viswanath & Davis 1996). Chau and Hu (1999) and Hu, Chau, Sheng, and Tarn (1999) used physicians as subjects in their studies.

The organisational context under investigation in this study is Thai Business Schools in the Public University Sector. The organisational context refers to the specific environment where the individual works and the investigated technology acceptance takes place (Han 2003). The interpretation of user

behaviour within this organisational context will also help to make clear how important a role the organisation plays in determining usage behaviour. There are several kinds of organisational contexts from previous research, for example, the MBA program at the University Of Michigan (Davis, F. D., Bagozzi & Warshaw 1989), part-time MBA students at an eastern university (Igarria, Magid, Guimaraes & Davis 1995), business school students (Taylor, S & Todd, P 1995; Taylor, S & Todd, PA 1995), university (Agarwal & Karahanna 2000; Agarwal & Prasad 1998; Szajna 1996), US., Swiss and Japan three airline companies (Gefen & Straub 1997), and public tertiary hospitals in Hong Kong (Hu, P. J. et al. 1999).

Cultural context

As previously mentioned, most models/theories of technology acceptance were formulated in the U.S and these studies did not consider the impact of cultural factors on usage behaviour. There is interesting evidence from literature about the impact of culture on IT adoption and use. Zakour (2004) claimed that individuals were conditioned by their culture, so the impact of cultural factors on usage behaviour should be considered when studying the Technology Acceptance Model in countries outside the U.S. Hofstede (1997) stated that culture⁴, shaped individual values and affected behaviour and was seen to be different across nations or continents – people may behave differently depending on their culture. Little research has attempted to link culture with Models of Technology Acceptance or usage. However, some previous researchers have linked their research with culture. Gefen and Straub (1997) when they conducted a three-country study to test TAM across cultures found that TAM held for the US and Switzerland but not Japan. Igarria and Iivari (1995) studied cross-cultural settings between two countries and found that culture exerted effects on the computer self-efficacy of Finns. Therefore, there was supporting evidence that culture may impact on IT usage, and so cultural aspects will be integrated into the proposed research model.

According to Hofstede (1997), language groups or linguistic affiliation levels and organisational levels are two different levels of culture. Cooper (1994) found that the organisational cultural role was significant in new IT implementation. Collectively, four cultural aspects considered to have effects on determining Thai Internet usage include:

1. The culture in respect of the habits of Thai people who do not like, or have no habits, of reading and writing. This contradicts the natural culture of using the Internet which needs an effort of reading and/or writing,
2. The Thai language, the first or national language of the Thai people, is different to the main Internet language (English language). Moreover, databases developed in the Thai language are still not sufficient to support the demands of the Thai people, so Thai people or academics have to search the Internet in English to get the information they need, if this is not available in the Thai language,
3. Many leading public universities in Thailand have strategies to change their nature and become research oriented universities. This may help indirectly to influence academics to use the Internet more in their work in order to prepare themselves for the future,
4. One of the strategies of the National IT Policy (2001-2010) (IT 2010) is to stipulate e-Education, so many public universities that are state universities or state-supervised universities have a goal to become e-universities in the future. This will positively affect Internet usage of academics in order to prepare them for the near future.

⁴ Culture is “collective programming of the mind which distinguishes the members of one group or category of people from another” (Hofstede 1997). Culture is also defined as “the complete way of life of a people: the shared attitudes, values, goals, and practices that characterize a group; their customs, art, literature, religion, philosophy, etc.; the pattern of learned and shared behaviour among the members of a group” (Digglossary 2004).

Thus cultural aspects will be integrated into the research model to be investigated together with the determinants and moderators to see whether they may have any effects on Internet usage behaviour by academics within Thai Business Schools.

The Research Model and Hypotheses

Some previous research such as that by Davis, Bagozzi and Warshaw (1989), focused on individual acceptance of technology by using intention and/or usage as the key dependent variable. However, this research was conducted mainly in North America in which models of Technology Acceptance were originally developed, surveyed with individuals' actual usage (Davis, 1989; Davis, Bagozzi & Warshaw 1989). The basic concept underlying user acceptance models is that individual reaction to the use of information technology influences actual use of information technology⁵, and consequently, influences intentions to use it. Intention to use is found to be a predictor of actual use (Venkatesh, Viswanath et al. 2003). Regarding a new technology, in some researches, a longitudinal field study was used and intention to use was captured before actual usage behaviour was measured (Venkatesh, Viswanath et al. 2003).

Nevertheless, some research studied only intention to use (behaviour intention). For example, Chau and Hu (1999) surveyed individual professionals (physicians) by examining physicians' intention to use telemedicine technology in Public tertiary hospitals in Hong Kong. They claimed that according to Szajna (1996) and Moore and Benbasat (1991), technology acceptance can be measured by actual technology use (user behaviour) as well as by intention to use (behaviour intention). Chau and Hu (1999) selected intention to use over actual usage to measure technology acceptance. They claimed that the decision was practical and theoretically justifiable because at the time of the study, actual use of telemedicine technology in Hong Kong was not widespread. However many organisations had shown considerable interest in telemedicine-assisted services and some had committed to or actually implemented the technology. The constraint of primitive but growing technology use prohibited them for using actual technology use to generate results with statistical significance. Taylor and Todd (1995) reported that when comparing experienced users and inexperienced users, TAM has the power of predicting and explaining usage behaviour almost equally.

When Internet usage started in Thailand more than ten years ago (in 1991) there were only 30 Internet users in Thailand (NECTEC 2004). By today, actual Internet usage in Thailand is not widespread when compared to the U.S. Currently, Internet use is 8.4 million people – equal to only 12.7% (penetration rate) (*Internet Usage for Asia* 2006). Since the Internet has been used for this long in Thailand, therefore, actual usage was chosen to measure technology acceptance by academics in order to explain usage behaviour. However, the role of behaviour intention as a predictor of behaviour is critical (Venkatesh, Viswanath et al. 2003), in this case, because of a cross-sectional study, the role of behaviour intention is as a predictor of future behaviour. Therefore, for this study, behaviour intention was also chosen to measure technology acceptance in order to find out about academics' future usage behaviour.

Five core constructs (perceived usefulness, perceived ease of use, social influence, self-efficacy and facilitating conditions), five key moderators (gender, age, experience, educational level and voluntariness of use) and another four culture aspects will be integrated into the research model (see figure 1). Several hypotheses will be tested regarding whether determinants, moderators, and culture aspects may effect on user behaviour, and behaviour intention.

5 Information Technology: computer technology both hardware and software for processing and storing information, as well as communication technology including networking and telecommunications for transmitting information (Martin et al. 2002; Thesaurus 2006).

Perceived Usefulness

Perceived usefulness (PU) in TAM (Davis, 1989), TAM2 (Venkatesh, Viswanath & Davis, 2000), and Augmented TAM or Combined TAM and TPB (Theory of Planned Behaviour) called (C-TAM-TPB) (Taylor, S & Todd, P 1995), is used as a direct determinant of behaviour intention and/or usage behaviour. Perceived usefulness is analogous to the relative advantage of perceived characteristics of an innovation by Rogers (1995). Perceived usefulness is defined and used for this study as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis 1989; Davis, Bagozzi & Warshaw 1989). The influence of perceived usefulness on behavioural intention and/or usage behaviour is expected to be moderated by gender and age. Since gender and age differences have been shown to exist in technology adoption contexts (Morris, Venkatesh & Summer 2000). It has been found that the effect of performance expectancy (which is similar to perceived usefulness) on behaviour intention was moderated by gender and age (Venkatesh, Viswanath et al. 2003). Moreover, Levy (1988) suggested that studies of gender differences can be misleading without reference to age. This research expects that the influence of perceived usefulness on usage behaviour and behavioural intention will be moderated by both gender, age, and cultural aspects. The hypotheses are:

Hypotheses on usage behaviour (U)

- *H1a (U). Reading and writing habits will moderate the influence of perceived usefulness on usage behaviour.*
- *H1b (U). Thai language will moderate the influence of perceived usefulness on usage behaviour.*
- *H1c (U). The university that plans to be a research oriented university will impact on the influence of perceived usefulness on usage behaviour.*
- *H1d (U). The university that plans to be an e-university will impact on the influence of perceived usefulness on usage behaviour.*
- *H1e (U). Gender and age will moderate the influence of perceived usefulness on usage behaviour.*

Hypotheses on behaviour intention (BI)

- *H1a (BI). Reading and writing habits will moderate the influence of perceived usefulness on behaviour intention.*
- *H1b (BI). Thai language will moderate the influence of perceived usefulness on behaviour intention.*
- *H1c (BI). The university that plans to be a research oriented university will impact on the influence of perceived usefulness on behaviour intention.*
- *H1d (BI). The university that plans to be an e-university will impact on the influence of perceived usefulness on behaviour intention.*
- *H1e (BI). Gender and age will moderate the influence of perceived usefulness on behaviour intention.*

Perceived Ease of Use

Perceived ease of use is analogous to the complexity of perceived characteristics of an innovation by Rogers(1983), although in the opposite direction. Perceived ease of use is similar to effort expectancy which is defined by Venkatesh, Morris, Davis, and Davis (2003, p. 450) as: “The degree of ease associated with the use of the system.” For this study, perceived ease of use (PEOU) is considered to be a direct determinant of usage behaviour and behaviour intention and is defined and used here as the degree to which a person believes that using a system would be free of effort (Davis, 1989; Davis, Bagozzi & Warshaw 1989).

There is a similarity between perceived ease of use and effort expectancy in the concept, construct definitions and measurement scales (Davis, F. D., Bagozzi & Warshaw 1989; Moore & Benbasat 1991;

Plouffe, John & Mark 2001; Thompson, Higgins & Howell 1991; Venkatesh, Viswanath et al. 2003). The influence of the effort expectancy on behaviour intention was moderated by gender, age and experience (Venkatesh, Viswanath et al. 2003). Therefore, it is expected that the influence of perceived ease of use toward usage behaviour and behaviour intention will be moderated by cultural aspects, gender, age and experience, and educational level. The hypotheses are:

Hypotheses on usage behaviour (U)

- *H2a (U). Reading and writing habits will moderate the influence of perceived ease of use on usage behaviour.*
- *H2b (U). Thai language will moderate the influence of perceived ease of use on usage behaviour.*
- *H2c (U). Gender, age, and experience will moderates the influence of perceived ease of use on usage behaviour.*
- *H2d (U). Educational level will moderates the influence of perceived ease of use on usage behaviour.*

Hypotheses on behaviour intention (BI)

- *H2a (BI). Reading and writing habits will moderate the influence of perceived ease of use on behaviour intention.*
- *H2b (BI). Thai language will moderate the influence of perceived ease of use on behaviour intention.*
- *H2c (BI). Gender, age, and experience will moderates the influence of perceived ease of use on behavioural intention.*
- *H2d (BI). Educational level will moderates the influence of perceived ease of use on behavioural intention.*

Social Influence

According to Venkatesh, Morris, Davis and Davis (2003), social influence is a direct determinant of behavioural intention and is represented as a subjective norm in the Theory of Reasoned action (TRA) (Ajzen & Fishbein 1980; Fishbein & Ajzen 1975), TAM2 (Venkatesh, Viswanath & Davis, 2000), Theory of Planned Behaviour (TPB) (Ajzen 1991), Decomposed Theory of Planned Behaviour (DTPB) (Taylor, S & Todd, PA 1995), and Augmented TAM or Combined TAM and TPB (C-TAM-TPB)(Taylor, S & Todd, P 1995), etc. The influence of social influence on behavioural intention was moderated by gender, age, experience, and voluntariness (Venkatesh, Viswanath et al. 2003).

Social influence is defined here as “The degree to which an individual perceives that other important persons believe he or she should use the technology/system” (Venkatesh, Viswanath et al. 2003, p. 451). The influence of social influence on usage behaviour and behavioural intention are expected to be moderated by gender, age, experience, and voluntariness. The hypotheses are:

- *H3 (U). Gender, age, voluntariness and experience will moderate the influence of social influence on usage behaviour.*
- *H3 (BI). Gender, age, voluntariness and experience will moderate the influence of social influence on behavioural intention.*

Self-Efficacy

Self-efficacy is defined as the internal notion of the individual and is related to perceived ability (Bandura 1986). With respect to Information Technology usage it was anticipated that higher levels of self-efficacy lead to higher levels of behavioural intention and IT usage (Compeau & Higgins 1991). Taylor and Todd (1995) argued that in DTPB, self-efficacy was a significant determinant of perceived behavioural control, and also a significant determinant of behaviour. However, for this study it is expected that self-efficacy is a significant determinant of usage behaviour and behaviour intention and

the influence of self-efficacy will be moderated by some cultural aspects and educational level. The hypotheses are:

Hypotheses on usage behaviour (U)

- *H4a (U). Reading and writing habits will moderate the influence of self-efficacy on usage behaviour.*
- *H4b (U). Thai Language will moderate the influence of self-efficacy on usage behaviour.*
- *H4c (U). Educational level will moderate the influence of self-efficacy on usage behaviour.*

Hypotheses on behaviour intention (BI)

- *H4a (BI). Reading and writing habits will moderate the influence of self-efficacy on behaviour intention.*
- *H4b (BI). Thai Language will moderate the influence of self-efficacy on behaviour intention.*
- *H4c (BI). Educational level will moderate the influence of self-efficacy on behaviour intention.*

Facilitating Conditions

Facilitating conditions are defined as “The degree to which an individual believes that an organisational and technical infrastructure exists to support use of the system” (Venkatesh, Viswanath et al. 2003, p. 453). The empirical results also indicated that facilitating conditions did have a direct influence on usage beyond that explained by behavioural intention alone. Consistent with TPB/DTPB, facilitating conditions was also modelled as a direct antecedent of usage. Moreover, the influence of facilitating conditions on usage was moderated by age and experience, the effect stronger for older workers, particularly with increasing experience (Venkatesh, Viswanath et al. 2003). The absence of facilitating resources represents barriers to usage and may inhibit the formation of intention and usage. However the presence of facilitating resources may not encourage usage (Taylor, S & Todd, PA 1995). Venkatesh, Morris, Davis and Davis (2003), found that facilitating conditions was non-significant as a determinant of intention. This research expects that facilitating conditions will not have any influence toward behaviour intention but only on usage, and that the influence on usage will be moderated by age and experience. The hypotheses are:

- *H5. Age and experience will moderate the influence of facilitating conditions on usage behaviour.*
- *H6. Facilitating conditions will not have a significant influence on behaviour intention.*

User Behaviour (Dependent Variable)

Normally in Thai Public Universities, Internet usages by academics depend on their volitional control, in the other words, depending on their wills. So it means that this research was conducted in the context of voluntary use which is similar to most previous researches. Since an individual's stated preference to perform the activity (i.e. behavioural intention) will in fact be closely related to the way they do behave, this assumption only applies when the behaviour is under a person's volitional control (Ajzen & Fishbein 1980). Therefore, academic's intention to do/use the Internet will be closely related to their usage behaviour if the use of the technology depending on their wills. Because of this, it supports that actual usage may influence behaviour intention (to use the Internet in the future). Therefore, this research expects that usage behaviour will have a significant positive influence on behaviour Intention to use the Internet in the future. The research hypothesis is:

- *H7. Usage behaviour will have a significant positive influence on behaviour intention.*

Behaviour Intention

From previous research, especially in longitudinal studies, the path from behavioural intention to behaviour is significant in TAM, TPB, and DTPB models according to Taylor and Todd (1995). The importance of behaviour intention as a mediating variable can be seen when behaviour intention (BI) is

omitted from the three models (TAM, TPB, and DTPB) and direct paths are provided to behaviour (user behaviour). When BI is omitted, the prediction of behaviour decreases substantially (Fishbein & Ajzen 1975). User Behaviour is largely influenced by behavioural intention, which on its own explains almost 30% of the variance in behaviour (Taylor, S & Todd, PA 1995). So BI plays an important role in predicting behaviour but it is important to note that BI is more predictive of behaviour when individuals have had prior experience with behaviour (Taylor, S & Todd, P 1995). However, in this cross-sectional study, individual academics already have experienced using the Internet. Therefore, at the time of survey, academic' behaviour intention was logically influenced by actual usage (usage at the time of survey). Significantly, behaviour intention will play an important role in predicting usage behaviour in the future.

Research Methodology

This research employed the survey research methodology by using semi-structured interviews and questionnaire methods to collect primary data. These two approaches: interviews and questionnaires complement one another in that the weaknesses of one approach are complemented by the strengths of the other. Previous and current research which studied technology acceptance employed a similar research methodology, but most of them used only questionnaire surveys. The following examples of previous researchers that used only questionnaire surveys include Chau and Hu (1999), Gefen, Karahanna and Straub (2003), Hu, Chau, Sheng, and Tam (1999), Igbaria, Magid, Guimaraes and Davis (1995), Taylor and Todd(1995), Taylor and Todd(1995), Venkatesh (1999), Venkatesh. and Davis(2000), Venkatesh and Morris (2000). Other research, for example, Chau and Hu (1999) used interviews together with questionnaires survey.

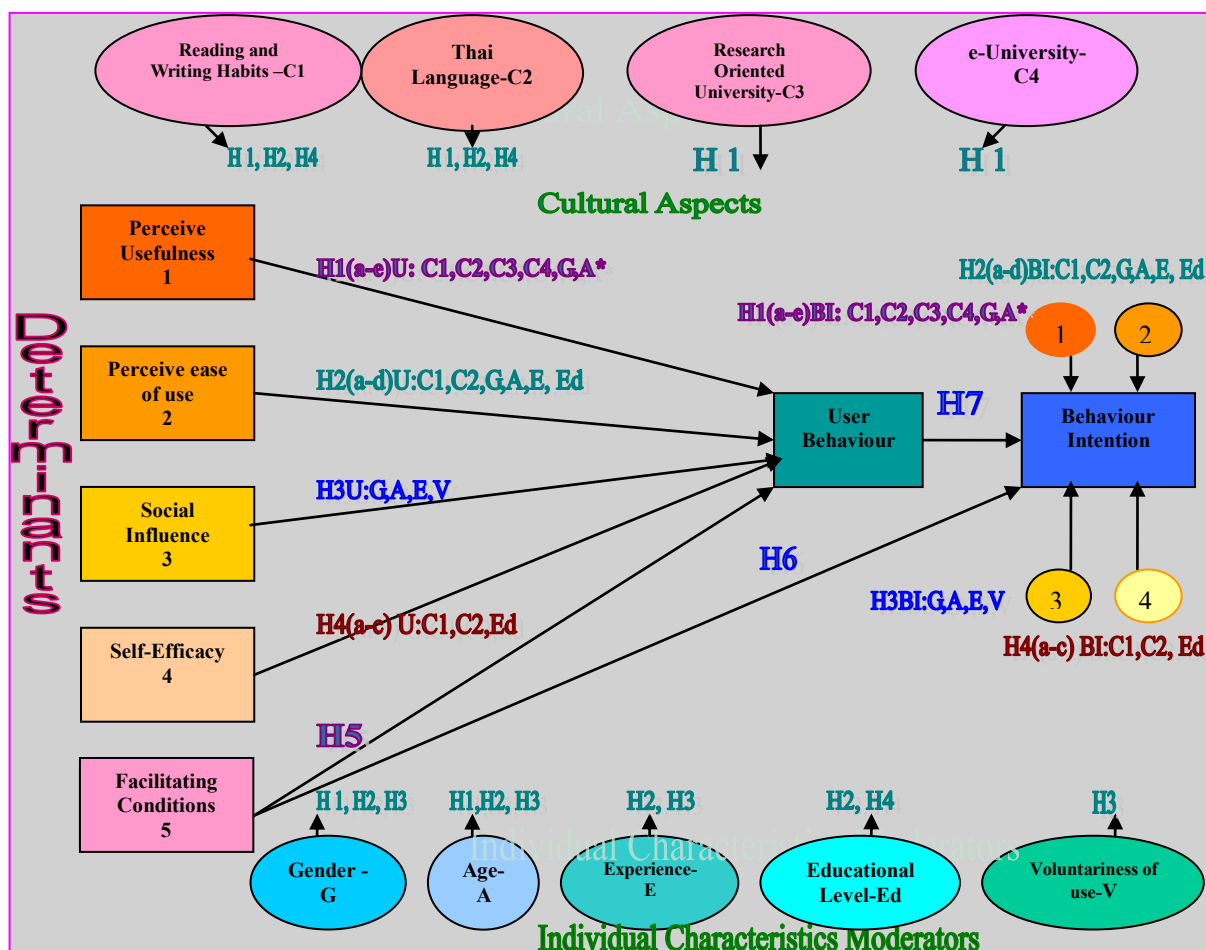


Figure 1: The Research Model

*H1(a-e)U/BI: Five hypotheses will be tested whether the influence of perceived usefulness on usage behaviour (U)/behaviour intention(BI) will be moderated by reading and writing habits(C1), Thai language(C2), research oriented university(C3), e-university(C4), gender(G), and age(A).

Semi-Structured Interviews

The interview method used in this research is semi-structured interviews. Ten Business School were selected by simple random sampling and then ten academics were selected from each Business School for interviews by using the same technique. Each interview was conducted within 30-60 minutes of face-to-face (personal interviews) using tape-recording or telephone interviews.

Questionnaire Survey

The questionnaire is a convenient data collection mechanism for this research to gather primary data (Sekaran 2000). The items used in measurement of the research model (items used in questionnaire) were based mostly on items used in measurement from many researchers such as Venkatesh, Morris, Davis and Davis (2003), Venkatesh and Davis (2000), Taylor and Todd (1995).

The questionnaire design was pre-tested by distributing 20-30 questionnaires to respondents. Pre-testing helped highlight any potential problems with wordings or measurement and ambiguities (Sekaran 2000), because question wording substantially influence accuracy (Zikmund 2003). After pre-testing, the questionnaire was revised since the respondents had suggested some changes.

After that the pilot study was distributed to two Thai Business Schools within two Private Universities. The response rate was 64.6% (42 responses from the total of 65 academics). From the results of reliability tests and data analysis, a minor change was also made to the questionnaire design.

Population and Sample

Target population for this study was comprised of academics that have Internet experience. There are an estimated 1,045 academics within 22 Business Schools in 24 Universities in the Thai Public University sector. Within 24 universities, one university has three Business Schools or equivalent located and managed separately, and four universities have no Business Schools or equivalent. Approximately 1,100 questionnaires were distributed by mail to the secretarial offices within Business Schools and from there distributed to respondents. It was clearly stated on the top of the questionnaire that: 'This survey is for respondents who have Internet experience only'. After more than three months and several telephone calls, the survey yielded a total of 455 usable questionnaires. Some questionnaires were unusable due to having too much missing data (sometimes only one section responded imperfectly) and one participant replied that although she had no Internet experience she wanted to help.

From an estimated 1,045 academics, 109 academics were on educational leave, and 9 academics had no Internet experience, so the target population was 927 academics. Consequently, the response rate of this survey was 49% (n= 455: usable questionnaire returns from target population N=927 academics). Participation was on a voluntary basis.

Model Generating by using SEM with AMOS

The main objective of this research study is to generate a model of Technology Acceptance that best described usage behaviour of academics who have Internet experience within Thai Business Schools. The generated model is expected to be a model that is both substantively meaningful and statistically well-fitting(Byrne 2001, 2006).

In order to achieve this main research objective, structural equation modelling is considered to be suitable. A structural equation model (SEM), or path model, depicts the structural relationships among constructs (Sharma 1996). In other words, SEM is a model of relationships among variables (Hayduk

1987). It is a statistical methodology that takes a confirmatory (i.e. hypothesis-testing) approach to the analysis of a structural theory relating to some phenomenon with two important aspects (1) the causal processes under study are represented by a series of structural equations, and (2) these structural relations can be modelled pictorially to enable a clearer conceptualization of the theory under study (Byrne 2001, 2006). When compared to other multivariate techniques, SEM has four significant benefits over those other techniques (Byrne 2001, 2006).

2. SEM takes a confirmatory approach rather than an exploratory approach to the data analysis, although SEM can also address the latter approach. SEM lends itself well to the analysis of data for the purposes of inferential statistics. On the contrary, most other multivariate techniques are essentially descriptive by nature (e.g. exploratory factor analysis) so that hypothesis testing is possible but it is rather difficult to do so.
3. SEM can provide explicit estimates of error variance parameters, but traditional multivariate techniques are not capable of either assessing or correcting for measurement error.
4. Data analysis using SEM procedures can incorporate both unobserved (i.e. latent) and observed variables, but the former data analysis methods are based on observed measurements only.
5. SEM methodology has many important features available including modelling multivariate relations, or for estimating point and/or interval indirect effects whilst there are no widely and easily applied alternative methods for these kinds of features.

Because of these outstanding features SEM was considered for use in model generation for this study. By using SEM, the hypothesized model can be tested statistically in a simultaneous analysis of the entire system of variables to determine the extent to which it is consistent with the data. If the goodness of fit is adequate, the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected (Byrne 2001, 2006). However, despite the fact that a model is tested in each round, the whole approach is model generation rather than model testing (Byrne 2001, 2006).

In spite of the fact that SEM is being used with the AMOS program (AMOS is an acronym for 'Analysis of Moment Structures' or the analysis of mean and covariance structures (Arbuckle 2005; Byrne 2001, 2006) other statistical analysis methods using SPSS must be used in descriptive data analysis. The interview analysis results will help to complement results obtained from these statistical analyses.

Data Analysis and Results

Reliability

All internal consistency reliabilities by using Cronbach's alphas were greater than 0.70 and were considered to be good and acceptable including: perceived usefulness (0.908), perceived ease of use (0.943), social influence (0.907), facilitating conditions (0.843), perceived ability/self-efficacy (0.716), usage behaviour (0.840), behaviour intention (0.910), frequency of current usage (0.874), frequency of behaviour intention (0.839), motivation to make full use of the Internet (0.839), and professional practice (0.898), professional development (0.915) and quality of working life (0.821) respectively. According to Sekaran (2000), reliabilities less than 0.6 are considered to be poor, those in the 0.7 range, acceptable, and those over 0.8 good, the closer the reliability coefficient gets to 1.0, the better. The reliability indicated how well the items in set (concept) were positively correlated to one another.

Demographic Data

Respondents were female (60.5%) and male (39.5%), age in the range of 30-39 years (40%), 40-49 years (24.7%), 20-29 years (22.7%), and 50 years up (12.7%) respectively. Most of them graduated at Master Degree Level (82.9%), Doctoral Level (13.3%), and with Bachelor Degree (3.8%). Academic positions were lecturer (74.4%), assistant professor (14.3%), and associate professor (10.8%), and professor (0.4%). Almost all academics (95.5%) responded that they used the Internet of their own free will. Academics (94.4%) acknowledged that their universities have a plan to become research oriented in the future, and academics (66.7%) also acknowledged that their universities plan to become e-Universities in the future.

Background of Internet Usage

At the time of the survey, respondents had used the Internet for about 6-10 years (58.5%), more than 10 years (20.9%), 1-5 years (19.8%), and less than 1 year (0.9%). In general, they used the Internet 'several times a day' (61.5%), 'about once a day' (14.5%), 'five to six times a week' (8.4%). They assessed themselves as having moderate Internet experience (69.5%), high experience (19.6%), and low experience (10.8%). They thought that they had used the Internet enough (48.9%) which was likely to be equal to those who thought that they had used the Internet not enough (47.8%), only 3.3% of them thought that they had used the Internet too much. The web-browser that they used most was the Microsoft Internet Explorer (95.1%). Mostly used Internet services were websites (43.4%), both websites and email (37.9%), email (7.7%). Mostly, they accessed the Internet at their office (60.9%), both at home and office (21%) and at home (6.6%). With respect to the Internet access method at their office, they used their university networks (92.1%), and wireless (6%). On the other hand they used dial-up (45.5%), broadband (31.8%) and wireless (11.4%) at their home.

Actual Internet Usage and Intention to Use

For this study, academic work (Rosenfeld, Reynolds & Bukatko 1992) was categorised into two major groups. The first group was teaching and teaching related tasks including (1) teaching in class, (2) providing a personal Web-Base for facilitating teaching, (3) preparing teaching materials, (4) enhancing their teaching knowledge, and (5) providing student contact and giving advice. The second group was other work including (1) searching information for their research, (2) administrative tasks, (3) personal tasks, (4) enhancing personal knowledge, and (5) using email for personal contact.

In accordance with the respondent's self-reports regarding the extent they currently used the Internet and their intention to use it, it has been found that they had hardly used the Internet ('used a few times a month') for teaching in class and providing personal Web-Base for facilitating teaching, but they intended to use more ('a few times a week') in the future. However, for five tasks including enhancing teaching knowledge, searching information for their research, personal tasks, enhancing personal knowledge, and using email for personal contact, their intention to use the Internet were slightly increased comparing to their actual usages. They had already used the Internet for these five tasks rather often ('five to six times a week'). At the same time they intended to use the Internet more from 'a few times a week' to 'five to six times a week' for three tasks including preparing teaching materials, providing student contact and giving their advice and administrative tasks. Collectively, no matter how academics used the Internet in teaching and other tasks, they intended to use the Internet more in all of their work in the future.

How to make full use of the Internet

Academics agreed if good facilities were available to support usage (e.g. good computer hardware and software, good communication network etc.) this would motivate them to make full use of the Internet. Moreover, they agreed that the other three things also motivated them to make full use of the Internet in their work including (1) their strong intentions for providing student contacts, (2) the university's policy

to be a research oriented in the future and (3) the university' policy to be an e-University in the future. On the other hand, they simply slightly agreed about the availabilities of technicians and Internet training motivating them to make full use of the Internet.

Professional Practices, Personal Development, Quality of Working Life

Academics agreed that using the Internet helped improve their professional practice (such as teaching in class, preparing teaching materials, researches, and administrative tasks), personal developments (such as improving their academic and personal knowledge) and quality of working life (such as saving their expense e.g. searching Information from e-Journal and Websites and using email in communication with others). Nevertheless, they only slightly agreed that the Internet help improve quality of working life in relation to having more time for leisure and creative thinking.

Technology Acceptance Modelling

As previously mentioned, by using SEM with AMOS, the model of Technology Acceptance can be generated, and the findings will make a contribution to knowledge regarding the factors that significantly influence academic use of the Internet and their intention to use it under the impact of some moderators in the specific environment. However, at present, the Technology Acceptance modelling is at the state of analysing data.

Limitations

The study presents some limitations as it targets only full-time academics within Business Schools in the Public University Sector in Thailand. Notably, this study will not cover all Rajabhat Universities since they have just become universities recently. Rajabhat Institutes have 42 institutes scattered around the country (*Address of Rajabhat Institute* 2004). In June 2004, all Rajabhat Institutes became Rajabhat Universities in accordance with the Rajabhat University Act (*Rajabhat University Act, draft, 10 June 2004* 2004). Therefore, the results of this study could be generalised to only Business Schools in all public universities in the country except all Rajabhat Universities. Moreover, the research scopes its study only within Business Schools because there is an attempt to prevent the type of subjects delivered by faculties or schools affecting Internet usage.

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What Can the *Instinctive Drive system*TM Offer the Workplace? A Qualitative Exploration

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Abstract

Despite the potential benefits afforded by teamwork within the workplace, it can be difficult for employers and senior personnel to establish and maintain teams that gel. It is a juggling act involving the delicate interplay of organisational goals and interpersonal dynamics. In the pursuit of enhancing team performance within the workplace, organisational and psychological literature has concentrated on the personal attributes of individual team members, as well as relevant societal factors. However, one area that is receiving increasing attention is the influence of the innate abilities of individual team members – those natural qualities that are constant and invariable. The Instinctive Drive (I.D.) systemTM offers a method for gauging individual instinctive drives, and recent quantitative research affirms that the tool is statistically reliable and valid. However, for the purpose of thoroughness, it is important to triangulate these quantitative findings with qualitative research. It is thus the purpose of this paper to qualitatively investigate the inherent value of the I.D. systemTM among some of its users. More specifically, ten senior personnel and ten general employees were interviewed to explore the perceived influence of the I.D. systemTM on individual performance, group performance and leadership. This consultative process was guided by a semi-structured open-ended interview schedule. Consequent research material was analysed for emerging themes, using an interpretive and a reflexive approach. Collectively, the interviewees recognised great value in the I.D. systemTM. It was a catalyst for greater communication between co-workers and with clients; it served as a window, providing users with an improved understanding of themselves and of others; it also initiated personal development as well as team development. These views were juxtaposed by a few unfavourable sentiments. Some for instance, warned that the use of this taxonomy might negatively stereotype individuals. Conversely, its focus on innate abilities may provide individuals with an opportunity to abdicate personal responsibility. Despite these potential shortcomings, the qualitative material presented in this paper complements previous quantitative research on the I.D. systemTM, and thus affirms its inherent value. This has important repercussions for business and behavioural sciences, particularly those efforts to improve team performance within the workplace. It highlights the need to focus future research endeavours on tools that not only expound individual difference, but also facilitate effective dialogue.

Introduction

Teamwork in the workplace can be particularly advantageous in the pursuit of organisational goals (West, 2004). When a collection of individuals has an identifiable purpose to develop an organisational

product, plan, decision or service, extensive interaction facilitates interdependent relationships. Through these relationships, complementary skills are identified and harnessed, and accountability is shared (Aamodt, 2004, Wood et al., 2004). Thus, the synthesis of different yet complementary attributes can further the efforts of individual employees who might otherwise

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be limited by those qualities they do not possess. The whole therefore, becomes greater than the sum of its parts.

However, team dynamics are vulnerable to a multitude of factors, including both the personal attributes of individual team members, as well as societal factors. The combination of these determinants places enormous demands on managers who are required to configure productive and collegial teams.

Instability in the employment sector has amplified these demands in recent years. This is partly attributable to the proliferation of globalisation, competition and market insecurity (Wood et al., 2004). Managers are thus compelled to adapt and mould work structures and workplace teams in hope of *best fit*.

Yet, this is not without problem, for there is limited predictability in the principal drives of staff behaviour. It is often difficult for managers to successfully predict the effectiveness of a team of individual employees (McShane and Travaglione, 2003). Evidently, this poses a serious concern, implicating *economic* (Schermerhorn et al., 2005), *social* and *personal* costs (Dewe and Trenberth, 2004). Despite growing research in organisational psychology to understand and improve team dynamics (Aamodt, 2004), definitive practices are still lacking (Fitzgerald et al., 2005a).

In the pursuit of enhancing team performance, much research has concentrated on the personal attributes of individual team members as well as societal causes (Wood et al., 2004). However, one area that is receiving increasing attention is the influence of the *innate* abilities of individual team members – that is, those natural qualities that are constant and invariable.

Link-up International Pty Ltd is one organisation that has brought the importance of innate qualities to the fore. After much exploratory effort, the firm purports that comprehending and appreciating the innate qualities of team members is the essence of understanding and enhancing team performance.

In the attempt to gauge the innate qualities of individual team members, *Link-up International* has devised the *Instinctive Drives™ (I.D.™) system*. Through a 32-question survey, the system is said to identify and assess the instinctive drives of each respondent. These are the *natural* qualities of the individual and are alleged to be the key to achieving and enjoying peak performance, personal fulfilment and optimum health. However, *Link-up International* proposes that it is by understanding the dynamics *between* the instinctive drives of each team member that team performance can be improved.

Using the *I.D. system™*, *Link-up International* has experienced a great degree of success in improving team performance within companies of various sizes. More importantly however, is the fact that empirical research efforts suggest that that tool is statistically valid and reliable (Fitzgerald et al., 2005b).

However, the inherent value of the tool, according to its users, has not yet been investigated. It is thus the purpose of the present paper to explore what the *I.D. system™* can offer the workplace.

Understanding Team Performance

Team composition is a crucial ingredient of team performance. A degree of homogeneity among team members can be advantageous for team dynamics. Individual members have the opportunity to develop relationships promptly, and thus engage in effective interaction to perform.

Conversely, homogenous membership can limit group progress. The development of innovative ideas and viewpoints may be stunted by the blinkers that limit creativity.

Heterogenous teams offer a rich pool of information, talent and varied perspectives. This in turn, can help improve team problem solving and increase creativity, which is especially valuable to those teams that operate in a highly complex environment

Yet, recent research indicates that team diversity is often a source of performance difficulty; this is particularly the case when the team is in its infancy (Schermerhorn et al., 2005). Heterogeneity appears

to contribute to interpersonal stresses and conflicts that impede upon the development of relationships, the sharing of information and the solving of problems. Managing these dynamics can hinder team processes and thus influence both team effectiveness and team efficiency.

However, once such difficulties are resolved, heterogeneous teams are well positioned to take full advantage of membership diversity to achieve its objectives and sustain itself over time (McShane and Travaglione, 2003).

Team performance is therefore the extent to which the results of a team are linked with organisational objectives. Admittedly, there are many ways to measure this. However, unlocking the full potential of a team that is rich in diversity is one of the great advantages of high performing organisations (Wood et al., 2004).

Understanding Workplace Teams

Despite their inherent value within the workplace, teams pose particular challenges to those in managerial positions. These include the limited ability of the manager to quickly predict whether a team is likely to succeed in its explicit role. While the technical expertise of individual team members might be explored, other aspects influence team performance, including the idiosyncratic practices of each team member. Consequently, a manager may ponder on whether he/she has assembled the most appropriate mix of individuals; whether the individuals will achieve organisational aims; and the kind of conflict that might arise within the team (Lee-Emery, 1990). Such considerations are particularly important given the likelihood of de-motivation, should individual team members be unable to cooperate effectively. Relevant literature advises that, in modern organisations that rely on teamwork, the “difference between highly effective organisations and less effective ones... lies in the motivations of its members” (Moorehead and Griffin, 2001, p. 113).

There is a wealth of literature pertaining to team building and team dynamics. It generally describes team building as the art of assembling individuals according to complementary skills or expertise for the purpose of task completion (Wood et al., 2004, Fitzpatrick et al., 2001, Wellins et al., 1991, West, 2004). Successful individuals are brought together to optimise the synergistic outcomes associated with teams (French et al., 2000, Lingard and Berry, 2002, Lingard et al., 2002, McShane and Travaglione, 2003, Salas and Fiore, 2004, West, 2004).

However, teams composed on the basis of cognitive abilities alone still often fail to achieve designated tasks. This is said to be because of *attitude* (Wood et al., 2004) – those evaluative assessments, both favourable and unfavourable, concerning witnessed experiences that relate to objects, events and people (Berry and Lingard, 2004, Robbins et al., 2003, Salas and Fiore, 2004, Thomas, 1998). Attitudes influence intention to behave in a specific way and include both cognitive and affective components – while cognition allows for reason, affect incorporates emotion (Sweeney and McFarlin, 2002).

Yet, this understanding of attitude fails to consider the influence of *inherent* drives. Without such knowledge, there is thus a limited appreciation for those factors that contribute to individual and collective behaviours.

There have been a number of efforts to improve team member attitudes. Most attempt to gauge individual learned behaviours that are adopted to understand self and/or others (Barrick et al., 1998, Guzzo and Dickson, 1996, Levine and Moreland, 1990, Tett and Murphy, 2002). Thus, very few diagnostic tools attempt to measure the inherent drives of individuals and possible impact on team *performance*; this limits their comprehensiveness. Yet, despite this, psychometric assessment in the organisational context remains very popular (Hoffman, 2002, Muchinsky and Monohan, 1987, Tett and Murphy, 2002).

The *Instinctive Drive System*™

Link-up International has attempted to fill the void in current business and behavioural research by exploring individual instinctive drives and their affect on team performance. The efforts of this firm have culminated with the *I.D. system*™ – a survey used to gauge the instinctive drives of each respondent.

The survey is comprised of 128 items categorised into 32 questions and four instinct subscales. These include *Verify*, *Complete*, *Improvise* and *Authenticate*, further detail for which is available elsewhere (Fitzgerald et al., 2005a, Fitzgerald et al., 2005b). Within the 32 questions, participants are asked to rank four options. For each of the four options, 1 is placed next to the alternative that the respondent is *most likely* to do, followed by 2, 3 and finally 4, indicating the option the respondent is *least likely* to do. Scores are reversed so that higher scores indicate a stronger drive towards the instinct, while lower scores indicate avoidance from that particular instinct. While it is not the purpose of this paper to discuss the theoretical foundations of the system, such information is available in other publications (Fitzgerald et al., 2005a, Fitzgerald et al., 2005b).

At an international level, the tool has proven to be effective at improving team performance. Further to this, the tool is supported by recent empirical efforts that suggest it is both valid and reliable (Fitzgerald et al., 2005a).

While such statistical validation is noteworthy, it is also important to explore the perceived value of the tool among its users. By furthering current knowledge on *I.D. system*™, a comprehensive understanding of the tool will be attained. This paper therefore presents a qualitative exploration of the perceived value of the *I.D. system*™ among some of its users.

Research Method

Research Tool

A semi-structured, open-ended interview schedule was designed to guide consultation with senior personnel and general employees of firms that had utilised the tool. More specifically, questions clustered around the following themes – the perceived influence of the *I.D. system*™ on individual performance; the perceived influence of the *I.D. system*™ on group performance; and the perceived influence of the *I.D. system*™ on leadership.

Recruitment Process

To recruit interviewees, *Link-up International* issued a return letter of consent to firms that were or had previously utilised the tool, which were randomly selected by the research team. The letter explained the nature and purpose of the study, and invited interested persons to contact the independent research team. Of the eight firms that received this letter, seven responded favourably to this invitation. While this suggests a representative cohort of the random sample, interviews were conducted with those staff members who were available at time of interview. Thus, given that convenience sampling was employed, there is no claim that the participants in this study constitute a representative sample.

Collection and Analysis of Research Material

Approval to conduct the research was gained from the university ethics committee. Each interview commenced with a reiteration of the return letter of consent and the signing of a consent form. Interviews were audio-taped and transcribed verbatim. QSR N-Vivo® software was used to aid detailed coding and analysis of the collected research material, facilitating the interpretation process.

An analysis of the research material allowed for themes to emerge, as the interviewees constructed their own meanings of situations through the interview process. Through the analytic phase of the project, the

research material was found to cluster around a number of core themes. To ensure consistency within each theme, codebooks were developed that included detailed descriptors of each theme, inclusion and exclusion criteria, and exemplars from the research material.

Through a reflective, iterative process, theme content was interrogated to explore relationships between and within the themes. The process enabled the researchers to engage in a systematic method of analysis using an eclectic process, whilst remaining open to alternative explanations for the findings (Creswell, 1998).

Objectivity in qualitative research is problematic. The perceptions of the research team of the issues under investigation cannot claim exclusive privilege in the representation of those issues. However, to ensure that diverse perceptions were reflected in the research material, two interviewers were present at each interview. Furthermore, regular meetings were held to provide the research team with a forum in which to discuss the research material and their interpretations. These meetings provided important opportunities to create, check and recreate meaning from observations and impressions, constantly reflecting on personal biases. Additionally, the research team was careful to ensure that the demographics represented in the study were diverse – this includes the demographics of those who were interviewed.

Research Findings

Research Participants

The research team interviewed 20 interviewees (14 females and 6 males) from seven different companies; while some of these firms were large, others were small to medium enterprises. The average age of the interviewees was 35 years. Ten participants assumed a director or management position, while the remaining were general employees of the company they were affiliated with. Length of service ranged between one and 12 years.

Findings

Reasons for Using the *I.D. System*TM

Despite the varied responses offered by the interviewees, the research material suggests that they collectively utilised the *I.D. system*TM to ensure the achievement of organisational aims. There was a need to circumvent those issues that may thwart the achievement of these aims. This was demonstrated in numerous ways. As the following excerpts suggest, some of the interviewees were hoping to enhance professional relationships, not only with co-workers, but also with clients:

“We wanted to improve team dynamics... Conflict; that particular one was the thing we were most looking to the I.D.TM to help us”;

“We have to please these clients.”

It was therefore believed that the *I.D. system*TM offered an effective tool to enhance professional interaction at several levels:

“That’s what it was about. It was to get two-way communication”;

“So they’ll work more comfortably together... that’s how we use it.”

The *I.D. system*TM was thought to explicitly demonstrate organisational interest in personnel. To ensure that staff members felt valued by senior management, some of the interviewees considered the tool to be an important way to verify that organisational interest went beyond commercial ambitions:

“Even at the outset, it was a part of its goal to me, a facilitator of communication... And part of that of course, is people underneath thinking, ‘Yes, there is at least a level of interest

in me and my needs and goals,' as opposed to... the corporate goals... Give them the idea that this was a two-way process. That's what I hoped would be achieved."

The *I.D. system*TM was also recognised for its ability to identify individual traits and illuminate personal practices:

"I... decided to try it out as a tool for... team management and teambuilding, and also... from the interest factor of understanding people and what makes them work."

Further to this, it was identified as a means of detecting problem idiosyncrasies and thus improving these, as appropriate. One interviewee advised that he uses the tool to "to identify strengths and weaknesses." In reference to fellow staff members, another interviewee stated:

"We want to help them be successful in what they are doing... Any tool that's going to help you do that more effectively and to help people to survive in their role for the long-term, not just survive and make it through, but actually enjoy it, is going to be a key."

The potential value of the *I.D. system*TM, as perceived by the interviewees, was apparent at various stages of employment. It was of little consequence whether a staff member had recently commenced employment with the organisation, or was soon to terminate his/her role. One relatively new senior staff member, for example, was particularly interested to see if his professional practices were congruous to that of existing personnel. Given his unfamiliarity with the employment milieu, the interviewee wanted to quickly understand his co-workers, which in turn would facilitate strong working alliances:

"The way I work towards a project goal is very different, which could put me [at] odds with the rest of the team."

However, another organisation sought a tool that would help understand the drives of existing staff members for the purpose of placing them in "more effective" teams. The organisation was keen to ease the transition of existing personnel into appropriate positions elsewhere. Senior staff members thus thought that the *I.D. system*TM might be of particular value in this situation.

Despite the various paths that led to the *I.D. system*TM, it appears that all of the organisations represented in this study were keen to reduce the negative impact of *organisational change*. This includes changes in personnel, employment practices or group dynamics. Circumventing the negative impact of such change was thought to be of benefit, not only for personnel, but ultimately for the clients.

Ironically, despite some interest in enhancing professional communication, the decision to utilise the *I.D. system*TM seldom involved both senior and junior personnel. It was typically a decision made by senior management in isolation from others.

The need to circumvent negative impact was often associated with a sense of urgency. A number of interviewees advised that they needed a tool that would not be arduous or time-consuming, but could be used to identify and address key concerns in an expeditious manner:

"The best thing is that you do not have to worry about a year of weaning the honeymoon period, getting to know the person... This is a quick way of seeing where the new staff member fits and what makes them tick."

This is quite an interesting find given the time typically required to understand professional practices and establish effective working alliances.

In summary, the reasons for using the *I.D. system*TM surround a need for improved interaction between employees, as perceived by senior staff. An improved understanding of individual differences was thought to facilitate communication. This desire for better communication generally arose from a need to change organisational climate promptly.

What the *I.D. System*TM Offered

Collectively, the interviewees spoke very favourably about the *I.D. system*TM. They suggested that it offered valuable insights and presented new opportunities for improving relations. A thorough analysis

of the research material suggests that the key benefit offered by the system was *communication*. The catalytic effects of the *I.D. system*TM facilitated greater interaction between employees at all levels, and with clients.

Communication with Co-Workers

Most interviewees advised that the *I.D. system*TM fostered intra-agency discourse. It became a point of discussion. Employees engaged in dialogue about their own professional practices:

“Some talked about [the I.D.TM report] quite enthusiastically... I don’t think there was anybody in the group that said, ‘No, that’s not me’.”

This in turn, allowed staff members to gain insight about the professional practices of fellow co-workers:

“We were given charts... we have everyone’s colours and we know everyone’s number. We had a session where we chattered about it and worked in small groups.”

Further to this, the *I.D. system*TM provided co-workers with a shared language to discuss and explore professional practice. When describing personal instincts, terms used within the tool like, *verify*, *authenticate*, *complete* and *improvise* were used with common meaning. Consequently, communication channels were expanded:

“I’m use complete, avoid improvise. [My co-worker] is use improvise, avoid complete, and so are the CEO and the General Manager; we basically go bang! And so he thinks about what’s happening on Sunday, and about eighteen months from now; I think about every other week in between.”

The research material suggests that communication begets communication. With improved interaction between employees, individuals became relatively more attuned to the communicative practices of fellow colleagues. One interviewee attested:

“You noticed others also carrying out that improved communication... [One co-worker said] ‘I came in this morning; I thought I was 15 minutes late for a meeting.’ [Another co-worker] said, ‘No, it’s 8.30. Go into your office, regroup... You need the time to regroup.’ She’s changing the way my diary works, giving me the breaks which I didn’t fill up.”

The notion that communication begets communication is affirmed by the suggestion that interaction between personnel needs to be regular and recurring. One instance of intense communication cannot be expected to benefit staff relations thereafter. A number of interviewees recognised this and spoke of attempts to facilitate regular intra-agency communication, particularly when team dynamics were altered:

“[One co-worker] presented a workshop to go through people’s I.D.TM, and how we can gel as [a] team. So we have those on a fairly regular basis, especially when we get our lot of new team members on board. We’ll go through it, try... to establish that there is no right or wrong in anyone’s I.D.TM. It’s how we work together as a team, you know. You always get, you know, this change issue; it’s a bit of challenge.”

Thus, while the *I.D. system*TM serves as a platform for improved communication, this communication needs to be regular and continuous to maintain effective interaction between employees.

Communication with Clients

Recognising the communicative benefits offered by the *I.D. system*TM, some of the interviewees advised that the tool was also used to enhance client relations. To ensure that they understand and are aptly prepared to work with individual clients, some of the interviewees requested clients to complete the *I.D.*TM survey. Subsequent results provided them with informative depictions, which were then used to shape staff-client relations. The following excerpts allude to this:

“You sit down with a client in the old days and they ask all these questions, and I can give information, and give information, and give information [until] they’re happy. But in the olden days, I didn’t know why they need [the information]. I would have been offended... It helped me with my clients. I tailor the interview to what they need”;

“We know a number of our client I.D.TM’s, our key clients... Knowing what their I.D.TM is... helped us deal with them more effectively, especially with communication... It’s a great way of tapping into the client and really sort of [making sure]... you’re giving what’s important to them; otherwise it is a trial and error”.

The *I.D. systemTM* thus has potential as a valuable educative tool. Some of the interviewees expressed that knowing the *I.D.TM* profile of key clients had a positive effect on their competitive advantage over other companies.

Understanding of the Self

According to most interviewees, the *I.D. systemTM* offered greater self-understanding. For some, it served to affirm the perception they had developed of themselves:

“I think the vast majority of the people said, ‘Yes, you’ve obviously been looking over my shoulder for the last 40-odd years’... or however long they’ve been alive.”

For others, it was a window providing a different vista of personal practice – in both the professional and personal domains:

“For me, it has helped me look at the process that I engage in when I’m working... [It helps in] evaluating my own work habits. For example, [my I.D.TM profile]... talks about how I like to be hands-on in everything, which I do”;

“Why I get so frustrated with some people and other people I seem to get on with quite well.”

Notably, the assessment tool was not always found to be correct in its appraisal. A few interviewees expressed reservation about the way they were depicted in the context of the *I.D.TM* profile:

“There is one little thing that I thought, ‘No, I don’t necessarily agree with it’... [But] I didn’t like, read it, thinking that I’ve got to believe everything it says about me... [It was] more about recognising myself in what it says.”

This passage suggests that the interviewee approached the *I.D. systemTM* with a degree of apprehension. She did not expect the tool to be completely accurate in its descriptions of her instinctive drives. Instead, she thought it might broaden the lens with which she views herself.

Another interviewee also spoke of apprehension around the accuracy of the *I.D.TM* profile. However, this individual recognised that this might be consequent to denial, rather than flaws within the *I.D. systemTM*:

“We’ve had the occasional people who thought, ‘No, it’s not me.’ I think it is really them, but they’re not wanting it to be that, because... when you go through it, ‘This is what you are,’ and some people might think, ‘Well, I don’t really want to be that way, even though I am inside.’ So yeah, I’ve seen some resistance in that regard.”

It appears that, in some individual cases, the *I.D.TM* profile can be quite confronting and can discourage active engagement with the system:

“I made a point of going through it and putting it away for quite awhile, because I don’t like to read everything and say, ‘That’s the truth about me’ and see what happens. Later I’ll look at it again.”

Nevertheless, a number of interviewees appreciated the consistent way in which their instinctive drives were reported. Uniform results offer predictability; they allow individuals to aptly prepare for particular situations and execute their responsibilities:

"I've come out in everything I've done fairly consistent. So, you see the picture, formulate the plan, work the plan."

Improving interactions between people often begins with self-awareness. The interviewees perceived the *I.D. system*TM to be of value when they wanted or needed to reflect on their own role and identity when interacting with others.

Understanding of Others

The interviewees offered extensive examples of the insights they had gained of fellow co-workers, consequent to using the *I.D. system*TM. The employee profiles offered an informative picture, summarising individual idiosyncrasies in an instant:

"[It provides]... an understanding of the dynamics that make up the problem."

The profiles however, offer far more than a mere numerical depiction of instinctive drives. Individual *I.D.*TM profiles are typically quite comprehensive and can serve like a point of direction. The profiles confer an understanding of other personnel, as well as guide effective professional practice:

"We all go through this I.D. systemTM with him and tell him, 'This is the way we'll be approaching the delivery of work to you, and when you're asking questions of the managers, you've got to be mindful of what their I.D.TM is as well'."

Such information is of particular value in the workplace. It can help to ensure that personnel are well suited to their assigned role and that they understand the division of labour. It also allows for the prompt and successful completion of tasks, as the following excerpt demonstrates:

"This guy is a 6781. So he's a bit of a perfectionist to some extent, and doesn't like change that much either. So basically, when giving him a job, we've got to go through steps one to ten with him. Now, some of the other managers here are of the complete opposite I.D.TM to him. I know one particular manager... he's a person who will just throw the job at them, 'You sort it out'... There's all sorts of problems because the jobs are just done in accordance with how he would like it done. But it's not explained how he would like to get it done. So that's how we'll be managing his guy... And we even might try and align him with one of our other managers who's got a similar sort of I.D.TM."

It thus appears that the *I.D. system*TM offers a swift method of identifying the individual co-worker who may assist with task completion. Although perhaps an exploitative view, the tool appears to be valued by those who are pressed for time. As one interviewee stated:

"I think that it's important that everyone understands each other, and so if I need someone to do something in a hurry, I look for a completer... I couldn't operate without everyone knowing their I.D.TM to be honest, and knowing each other's... [Especially] if you want a whole heap of particular things... done in a hurry. I have to think, 'I need this done. Will this person or that person do it better?' And on the balance of probabilities, the completer will do it better and so I give it to them."

To maximise mutual understanding among personnel, some organisations made the *I.D.*TM profiles of individual staff members readily available to all team members. The following statements demonstrate this:

"We've got them all up on a chart, and they're posted up in a couple of locations all round the place, so people can easily see what people's I.D.TMs are";

"It's up on the fridge down the back... both in terms of the do's and don'ts, so people can look at it, and use it."

Thus, communication begets communication. Increased understanding of fellow co-workers yields greater empathy toward them and a greater commitment to collegial goodwill. As one interviewee noted, this is particularly the case among those in senior staff positions:

“In terms of interpersonal interactions, my experience to date has been that I.D.™’s actually have been helpful for us, because, if anything, we are probably easier on the people inside the organisation, than we might otherwise be in a workplace. I might have people here that I would’ve slapped one or two warning letters on already, because of the nature of employment law. But it’s a little bit different here, because we value having relationship capital as opposed to legal capital... We’ve been given strategies to improve [workplace] frustrations and so... it adds value to us we couldn’t get elsewhere.”

This comment suggests that the *I.D. system™* may have an important role in furthering social capital within an organisation. By enhancing empathy between staff, it helps to retain employees and thus minimise disruption to team dynamics.

The *I.D. system™* may offer insight among employees. But according to one interviewee, it fails to adequately resource individuals to work effectively with others:

“With most of the personality things, they help you understand yourself, but they don’t necessarily equip you to work in a team environment well.”

Another interviewee affirmed this. He advised that improved understanding among co-workers is not, in itself, sufficient to generate professional harmony, for this requires commitment, as well as negotiation and communicative skills. Although improved understanding may help to justify particular behaviours, it does not necessarily guarantee greater collegial empathy, and may, in fact, yield conflict:

“[With my co-worker], he is inadvertently driving me up the wall!... I’m talking about X, Y and Z, and the user verify person will tell me why it’s not going to happen, because they see the problems, because they need a problem to solve. Then I’m like, ‘Oh, talking about raining on the parade!’ It’s driving me nuts. Constantly being told what the problems are. It’s just deflating, and especially deflating for the use improviser, because they need a lot of energy...”

We got a user verify, user authenticate drive. It’s very frustrating; just feels like you have to explain yourself, justify it, come up with the reasons why.

It’s really painful sometimes... feeling guilty that the person kept on complaining about how much work they had, but kept on taking more on.”

These revealing statements highlight the importance of ongoing skill development among personnel. Although staff may understand the idiosyncrasies of co-workers, they also require the dexterity to engage in appropriate communication that will facilitate workplace relations, and, consequently, task completion.

Opportunities for Personal Development

As stated, the *I.D. system™* was often the catalyst for improved communication – not only between staff members, but also with clients. However, communication did not simply occur for communication’s sake. Most of the interviewees recognised the potential value of the *I.D. system™* as a tool to initiate personal change. As one interviewee explained:

“From an individual perspective... it’s knowing my strengths and weaknesses and trying to play to the strengths and work on my weaknesses.”

Recollecting the way she experienced personal development, another interviewee alluded to a process of meaningful reflection. She deliberated on her professional practices and considered appropriate courses for action:

"I didn't go out and go, 'Okay, I need to do this.' I think I watched how I operated over a period of time and I've gone, 'Okay, this is where I need to adapt the way I operate to be more effective long term.'"

Through enhanced insight of self and others, personnel were able to further working alliances. This in turn, advanced the organisation as a whole. As exemplified in the following passage, individuals became better able to identify and implement ways to improve workplace practices:

"The most important thing in an organisation [is] communication, and it seems to me, in my experience, that communication problems come up more frequently [between] an authenticator and non-authenticators... and they cannot resolve it because they don't know what to do about it!..."

I find I have a lot of problems with authenticators. They all seem just so straight. But whatever they say, I'm hearing something else. [My partner] often describes it as if he's speaking Chinese, and I'm speaking Swedish and we both call it English. And that [mis]communication in an organisation can slow things down and [cause] so many problems... To me, that's one of the great strengths of the I.D.TM, because I know that when I say something... I know exactly what I mean... and the authenticator may hear something different... So I make sure that I ask that the person; just confirm what I've asked them to do. And similarly, if someone says something and I'm not clear on what they mean, I'll go actually ask them."

Another interviewee also stated that diversity in I.D.TM profile may explain some communication difficulties within the workplace. In turn, this awareness may enhance understanding between organisational members and improve relations:

"That's one of the greatest pluses for I.D.TM in an organisation, in that you can actually get around communication problems... [Most people cannot] honestly admit, 'Look mate, I don't know what you're asking me. What do you want me to do? Why do you want to do that?'" [The I.D.TM is] just so fantastic. We are just not brought up to do that because we assume that if someone is speaking English, then we should be able to understand what they say."

This interviewee offers valuable insight into the catalytic potential of the I.D. systemTM in initiating personal development within the workplace. The aforementioned passages acknowledge and confirm the potential of the I.D. systemTM to help understand self and others, and improve communication within a team and an organisation.

Opportunities for Team Improvement

According to a number of interviewees, enhanced communication typically aided team development. An interviewee explained:

"The communication issue is the number one issue. If you can get that going... then, I think you've got a good team."

Consequent to the greater insights individual team members had of themselves and of each other, they seemed to work more collaboratively, and more effectively. Using the I.D. systemTM, they became better able to identify those attributes or strategies that would facilitate the attainment of organisational goals. The following excerpts suggest this:

"It's really helpful when working out how I can be working with him more effectively; but he also knows, as my boss, how to get the best out of me. So, it has worked for both. Doesn't mean it works all the time, but certainly, it has been a very effective tool for us";

"That's helpful with the use verify, use authenticate drive; I'm a lot more frank without being rude, because she can handle it."

Some of the interviewees commented on how improved interpersonal relationships help strengthen working partnerships. This may be due to greater congruence between individual goals and team goals:

"It helps me to align myself with my team."

In addition, opportunities for team improvement were expressed as a result of improved understanding and communication within the team. In most cases, interviewees commented on behavioural change within the team, consequent to the use of the *I.D. system*TM; and as a result of behavioural change, interaction between team members was more effective. In particular, there was a clear beneficial effect reciprocated between team members and their leaders, consequent to the *I.D. system*TM. One leader commented on the comfort his staff members received from understanding his instinctive drives:

"The joke around the office is, 'Just say it in five words and get out of the office and he'll sort it out,' and all those staff have taken that onboard, you know. 'Don't sit there and tell me the details. Just tell me the bottom-line'... Of course, we have our moments, but they feel comfort in... the fact that, just because I don't want to know the details, doesn't mean that I'm not interested. It means that's the way I am."

Team members appeared to have a better understanding of the most effective way(s) to work with their leaders. This in turn, facilitated greater acknowledgement of individual requirements for improved performance. Commenting on his team leader, one interviewee stated:

"She exercises a leadership role [and] needs lots of information, lots of reassurance and [we] just feed back to her on a more regular basis. The guys have started to do that."

Further to this, team members recognised the importance of *I.D.*TM profile diversity within the team to enhance collective performance. Although there was often an appreciation for individual difference prior to completing the *I.D.*TM profile, this was not necessarily well understood. The *I.D. system*TM provided opportunity to reflect upon the self and others in an effort to create better interactions. Self-reflection was particularly important; consideration of one's own role when working with others reinforced feelings of self-worth within the team context. As one interviewee commented:

"[We found it] was actually essential for the team to have someone like me who is verify authenticate to operate effectively. That sort of person actually is an essential part of a team."

Interviewees also commented on the need to achieve balance among the diverse individual *I.D.*TM profiles. Such balance helps team members understand individual effects on working relationships:

"We looked at the balance, different kinds of ideas, why some working relationships were or weren't working."

As a result of balance within a team, team members began to understand the reasons for interactional difficulties, and the most appropriate way to overcome them:

"Working out that maybe we didn't have the right person. [For example] if they are in a job that really requires them to complete things for me, and they were an improvise person, they were never going to finish things. Whatever it is, we could see why maybe we were having problems there and adapt the role or shift the person to a role that [is] more effective."

Interviewees also commented on greater tolerance toward some team members, consequent to the *I.D. system*TM. This indicates that, when team members communicate, understanding each other's drives and requirements to achieve optimal performance are essential elements to ensure team performance. As one interviewee stated:

"I have gained an increased tolerance and perhaps appreciation for the distinct skills and abilities each individual contributes to the team."

In contrast, it was noted that increased tolerance of individual instinctive drives can initiate greater clemency. The *I.D. system*TM may be used to excuse, rather than rationalise, individual performance within a team:

“It maybe a weakness [if] you know what somebody’s I.D.TM is... You become tolerant of them... [and] you can maybe tolerate too much... That’s why you’ve got to have good and open communication about the whole process. So take responsibility, don’t use it as an excuse.”

This comment aptly demonstrates that awareness of the *I.D.*TM profile has the potential to lead to acceptance (subconscious or otherwise) of social loafing, both on the part of the individual and fellow team members. Yet, also noted by some of the interviewees is the notion of team responsibility. The team must ensure that the *I.D.*TM profile is not used to exonerate poor individual performance that stifles overall team functioning. As a catalyst for communication, the *I.D. system*TM can help to counteract this potential problem. In light of these perspectives, it thus appears that, while the *I.D. system*TM can cause a sentiment of tolerance for social loafing, it can simultaneously be used to monitor and manage tolerance among team members.

The *I.D. system*TM contains additional opportunities for team development. By tempering strong drives that may be ineffective and/or inefficient, it provides occasions to improve individual and team performance. One interviewee commented on the way *I.D.*TM profiles reveal efficiencies within a team, as well as their origins:

“We started looking at ways to try and have people realise that they probably didn’t need to verify to that extent, and [that] some behavioural issues were probably linked to some of our workflow bottlenecks. And just understanding that and being able to look at people in that light, and look at situations around the office in that light, we [were able to] at least understand the dynamics that make up the problem. Over the years, we have been able to address various situations, and I’ve tried different things... with that background in mind.”

This excerpt illustrates that the *I.D. system*TM uncovers great opportunities for team development. Diagnosis of team balance and associated consequences of *I.D.*TM profiles within a team, are integral parts of the *I.D. system*TM. However, rather than pragmatically prescribing the dynamics of the ideal team, the *I.D. system*TM offers great opportunity to learn from the existing balance and improve its efficiency. Evidently, this requires a level of tolerance, whilst simultaneously being attuned to organisational direction and goals.

However, intra-agency conflict is sometimes difficult to avoid. Despite this, the following section indicates that the *I.D. system*TM has an important role in the effective management of team conflict.

Conflict Management

A number of interviewees, particularly those in senior positions, recognised the benefits afforded by the *I.D. system*TM in effective conflict management. With enhanced insight into the way in which they and fellow co-workers functioned, they were able to identify possible causes of workplace conflict, rather than attribute blame to particular individuals. This is demonstrated in the following statements:

“It really helps me understand why we were having conflict – why we couldn’t communicate effectively; because I’m always looking below the surface, and he was always up here, and I’m looking for things that don’t exist... although we still have those issues, at least we understand why they happen”;

“As for effective working relationships... I would come into conflict with another key staff member. We are a bit at loggerheads; still trying to achieve the same goals, but really not able to do that well together. But we’ve been able to shift that. Realising that we are going about it differently, in terms of how we communicate and the way we process a problem or work on a project that involved both of us, is much more meaningful because we understand a little bit more of how each other works.”

As the second excerpt suggests, the *I.D. system*TM provides more than a method of merely identifying causes of workplace conflict. It also offers opportunity to effectively manage workplace conflict. The detail articulated in individual *I.D.*TM profiles enable senior personnel to harness particular strengths for the benefit of organisational aims.

Problem Solving

Given its potential value in the effective management of workplace conflict, it is not surprising to learn that the *I.D. system*TM also aided problem solving endeavours. According to a number of interviewees, the system served as a springboard into constructive organisational change. It helped each team member to understand the path to personal peak performance, highlighting both strengths and barriers. While strengths were harnessed for the benefit of organisational aims, shortcomings were managed and restrained appropriately. This in turn, facilitated greater alliance with a team of distinct individuals.

Yet, as one interviewee noted, change at a personal or organisational level is not always a trouble-free process:

“It’s got its challenges, because knowing what you’re I.D.TM is... is just a starting point. It’s the tip of the iceberg. I do implement change, not only within myself, but within the whole team, and I suppose that’s where my greatest challenge has been... with the team here. It’s... implementing that change, because with any change comes a deal of pain.”

Admittedly, the market is awash with various mediums to enhance workplace relations. Some of those consulted in the course of this project told of utilising other tools in the hope of improving problem solving practices within the workplace. However, according to some, these were not always effective. Although they offered insight into individual traits, they did little by way of enhancing problem solving practices:

“We would’ve been easily able to identify everybody else’s personality using those other kinds of tools that we’d used in the past, but they didn’t necessarily help us problem solve effectively...”

We enjoy the process of taking the material and discussing it and looking at how we can do things better... I haven’t had anyone come back to me and say, ‘No.’”

Hence, in terms of problem solving capabilities, the *I.D. system*TM helped to understand that different people have different ways of finding solutions. A greater understanding of how different people are driven to find solutions acted as a catalyst for change. Yet again is the suggestion of achieving goals swiftly, which is claimed to be a paramount aspect of using the *I.D. system*TM.

Leadership

Although effective problem solving practices were prized by most of the interviewees, such practices were of particular value to those in senior positions. In their position of leadership, it is important for them to be well-informed and well-resourced; and it appears that the *I.D. system*TM has the potential to assist with both.

Some of those interviewed advised that it is important to be well-informed – not only of workplace situations as they arise, but also of the strengths of individual staff members. When dire situations arise, such insight allows senior personnel to channel individual qualities appropriately for the benefit of the team and the organisation as a whole:

“Yeah, I suppose it helped me to better deal with people, especially when I know that other person’s I.D.TM.”

Insight into individual staff qualities also allowed senior personnel to utilise appropriate management techniques and therefore appear well-resourced. Rather than haphazardly select a management strategy that may ease a dire workplace situation, senior personnel made decisions that were more informed, and perhaps more likely to resolve workplace issues. Evidently, this ability to forecast prevented a waste of time and resources:

“[The I.D. system™] offers another skill in assessing particular staffing situations, and provides me with additional options as to how to deal with it.”

The *I.D. system™* is likely to influence leadership roles greatly. Literature in the field of organisational studies suggests that leaders are chiefly occupied with two concerns – human resource maintenance (that is, influencing individual competence and willingness to perform) and task performance (Wood et al., 2004). It can be argued that as team members understand the drives of fellow team mates, there is potentially less need for strong leadership in the form of human resource maintenance. Consequently, the role of leaders could shift toward a greater emphasis on task performance. The precise way in which the *I.D. system™* influences leadership is an area for future research.

Critical Aspects of the *I.D.™* System

Although the interviewees were offered opportunity to critique the *I.D. system™*, there were very few disapproving sentiments. Those noted appeared to cluster around key themes; namely, the potential for stereotyping others and the avoidance of personal responsibility.

Stereotyping

Some of the interviewees warned that users of the *I.D. system™* must be aware of the potential for stereotyping that may be seen to be discriminatory. An *I.D. system™* profile may invite some individuals, particularly senior personnel, to characterise fellow co-workers and perhaps make incorrect assumptions about skills and abilities. One interviewee noted:

“I don’t think you could use it to identify... I wouldn’t be using it as something [to] screen people out. It would be very important not to do that.”

Whilst an *I.D.™* profile may encourage stereotypical perceptions from others, interviewees also highlighted the difficulties of managing their own *I.D.™* profile. In particular, some deemed it an opportunity to avoid, if not abdicate personal responsibility.

Avoidance of Personal Responsibility

Some of those interviewed advised that the *I.D. system™* is sometimes used to rationalise personal apathy and lack of initiative. In reference to a fellow co-worker, one interviewee stated:

“They think that’s the way I am, and therefore I don’t take responsibility for anything else. That’s the way I am, so you have to live with me.”

Although another concurred with this view, he recognised a method to minimise the avoidance of personal responsibility – that is, effective interaction:

“That’s why you’ve got to have good and open communication about the whole process, so [employees] take responsibility and don’t use it as an excuse.”

There thus appears to be some concern around the ability of the *I.D. system™* to influence the identity of the self and of others.

Ethical Considerations

To encourage clients to consider the responsibilities associated with the *I.D. system™*, *Link-up International* provides all clients with *The Principles of Ethics and Protocols for the Proper Use of the I.D.™ system* (Wood and Burgess, 2003). The document reviews the importance of confidentiality, the need to correctly interpret *I.D. system™* results, the danger of assumption, labelling and false judgement, as well as the place of the *I.D. system™* within an extensive organisational system.

Despite the perceptible value of this document, the research material suggests that the operationalisation of ethics within the *I.D. system™* remains somewhat ambiguous. It appears that personal information unearthed by the system can be used for good *and* evil, for the privacy and confidentiality of individual employees were not always respected. In fact, the research material indicates that it would be rather naïve to assume a collective and balanced morality amongst all those involved with the *I.D. system™*.

Although not specifically asked to comment on ethical considerations, some of the interviewees shared their uneasiness about such matters. A particular concern related to the *presumption* of collegial goodwill. Use of the *I.D. system*TM was mostly viewed in the spirit of enhancing mutual understanding about instinctive drive among staff. However, it also assumes a degree of munificence among team members. As one interviewee explained, exposing personal vulnerabilities may generate negative repercussions:

“If the information is shared... it can expose people to weaknesses and if it’s not used in the right spirit, people can actually abuse that knowledge, I think. I am probably looking at an HR [Human Resources] perspective that if you know things about a particular person, that knowledge can be used for evil, if you like.”

Notwithstanding concerns around collegial goodwill, the availability of personal information also raises questions around confidentiality.

Comparisons with Other Tools

Some of the interviewees commented on other tools they had utilised in the past. One interviewee stated:

“I’ve done a great many of these things, and interestingly it doesn’t seem to matter, what I do. I’d always end up high in the top right-hand corner or somewhere like that, always out there.”

For management purposes, another spoke of using the Myers-Briggs Type Indicator (MBTI) (Myers and McCaulley, 1985) – one of the most popular personality typology tools used by organisations to develop stronger teams (Murray, 1990):

“I did [the MBTI] at a management workshop; I was in New Zealand. I think I’ve done it once in Australia at something I was at, and the results again were not all that dissimilar.”

The two aforementioned excerpts allude to perceived similarities between the *I.D. system*TM and other assessment tools used within the workplace. However, most of the interviewees suggested that a marked benefit of the *I.D. system*TM is its fundamental ethos – that is, its focus on team development, as well as its extensive scope. Some also indicated that the *I.D. system*TM complements other assessment tools, thus offering greater comprehensiveness.

Discussion

Current literature in the field of organisational psychology highlights the potential benefits afforded by teamwork within the workplace (West, 2004). However, it can be difficult for employers and senior personnel to establish and maintain teams that gel. It is a juggling act involving the delicate interplay of organisational goals and interpersonal dynamics.

To improve understanding around interpersonal dynamics, the *I.D. system*TM offers a method for gauging individual instinctive drives, and recent quantitative research affirms that the tool is statistically valid and reliable (Fitzgerald et al., 2005b). However, for the purpose of thoroughness, this paper sought to investigate the inherent value of the *I.D. system*TM among some of its users, and thereby complement existing quantitative findings with exploratory qualitative research.

Ten senior personnel and ten general employees were interviewed to explore the perceived influence of the *I.D. system*TM on individual performance, group performance and leadership. This consultative process was guided by a semi-structured open-ended interview schedule. Consequent research material was analysed for emerging themes, using an interpretive and a reflexive approach.

According to the interviewees, the *I.D. system*TM was used by the firms they represented to achieve organisational aims in an expeditious manner. The organisations sought to enhance professional interaction, identify individual strengths and weaknesses, and improve the alignment between employee

and professional role. These collectively allude to a desire to promptly reduce the negative impact of organisational change; and it appears that, for the most part, the *I.D. system*TM had the desired effect.

Collectively, the interviewees recognised great value in the *I.D. system*TM. They spoke of improved communication with co-workers *and* clients, an improved understanding of the self, as well as an improved understanding of others. Opportunities for personal development were also afforded by the *I.D. system*TM. These were particularly appreciated by senior personnel who prized the prospect of developing leadership qualities. Beyond the personal domain, the *I.D. system*TM had a positive influence on team development. It facilitated effective conflict management and problem solving efforts.

Despite its many benefits, the interviewees highlighted a number of limitations with the *I.D. system*TM. There is the risk that individuals may be stereotyped according to their *I.D.*TM profile. There is also potential for individuals to abdicate personal responsibility for their behaviours. Furthermore, it is possible that personal information will be misused, therefore breaching the privacy and confidentiality of employees. Another concern pertains to the *presumption* of collegial goodwill; knowledge about a co-worker's personal shortcomings may not always be used with benevolent intentions.

While potential shortcomings are noteworthy, some of those consulted advised that the *I.D. system*TM compares quite favourably to relatively more popular personality typology tools used within organisational settings, like the MBTI (Myers and McCaulley, 1985). The system appears to have a team-focus and an encompassing scope.

Despite the value of the present findings, a number of methodological limitations must be considered. Firstly, the cross-sectional nature of this project indicates that the interviewees provide a mere snapshot of opinions around the inherent value of the *I.D. system*TM within organisational settings. Secondly, qualitative research is limited by time, context and the nature of individual perspectives. Thirdly, the recruitment practices used in the present study may have biased the present findings. Similarly, the interpretive approach used to analyse the research material should be acknowledged as a source of bias. The findings reflect the interaction between the research team and the interviewees; they also reflect the research team's interpretation of these interactions, and are thus tainted by the frames the team members bring to the project (Eco, 1992). The construction of themes from the interview material may therefore not adequately encapsulate the perceptions voiced by the interviewees. Further to this, given that interpretation is continually evolving, the present findings have a limited lifespan.

Despite potential shortcomings, the qualitative material presented in this paper suggests that the *I.D. system*TM serves an important catalyst for organisational change. While most of the firms represented in the study employed the tool to address organisational change, it ironically *spurred* organisational change. More specifically, it facilitated effective communication at various levels, and served as a springboard into constructive modifications in both professional and personal practice.

The inherent value of the *I.D. system*TM within the workplace complements previous research that statically validated the tool (Fitzgerald et al., 2005b). This has important repercussions for business and behavioural sciences, particularly those efforts to improve team performance within the workplace. It highlights the need to focus future research endeavours on tools that not only expound individual difference, but also facilitate effective dialogue and organisational change.

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Adoption of Internet and Web Technology for Hotel Marketing: A Study of Hotels in Thailand

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Abstract

This paper examines the effect of three groups of characteristics: organisational, technological, and environmental on the adoption of Internet and Web based marketing activities (IWMA) in the hotel industry by using data collected from a sample of 152 hotels in Thailand. The adoption of IWMA has been categorised into two levels: 1) non-early adopter hotels, and 2) early adopter hotels. The results indicate that Thai hotels that adopted IWMA at the early adopter stage were larger in size, and more likely to be more ready to adopt IWMA than non-early adopter hotels were. Managers of Thai hotels in the early adopter stage were more likely to perceive the benefits and recognise compatibility when adopting IWMA than were managers in the non-early adopter hotels. Customer power and level of government support were considered to be the push factors for hotels in the use of IWMA at the early adopter stage more than for non-early adopter hotels.

Key words: Adoption, Internet, Web Technology, Hotel, Marketing

Introduction

In recent years, the development of the Internet has increased dramatically and many countries in the world have made efforts to improve their Internet services. On the demand side, the Internet consumer base increases globally every day. Consequently, the use of Internet and Web technologies is important and is becoming a direct marketing tool for improving the success of a business in the online environment. In the hotel industry, marketers are taking full advantage to capitalise on this opportunity. As mentioned by Carroll and Siguaw (2003, p. 38), "By 2005, an estimated 1 in 5 hotel bookings will be made online, up from 1 in 12 in 2002". In addition, according to a research conducted by PhoCusWright and reported by Mclean (2005) that online hotel sales were predicted to reach \$24 billion, 27% of all hotel booking revenue, by 2006.

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Although the trend of Internet commerce is increasing worldwide, there is still a gap between developing and developed countries in the use of Internet and Web technologies in online business. According to a report of e-readiness research (Economist Intelligence Unit, 2005), which rates each country's preparedness for e-business, Thailand ranks

44th out of 60 countries worldwide. Specifically, only 12.7% of the Thai population used the Internet in 2005 (the Internet World Stats, 2006). It seems that e-commerce in Thailand falls short when compared to neighbouring nations (ITU, 2002).

In fact, tourism is a way for Thailand to attract foreign currency and expand employment. Preliminary studies found that the use of Internet and Web technologies by Thai hotels was primarily for advertising, not for providing a fully interactive site with the full range of marketing functions, particularly e-commerce features (Khemthong et al., 2005). It is, therefore, important to understand the facilitating and inhibiting factors supporting the adoption and diffusion of the Internet and Web technologies for hotel marketing in Thai hotels.

The main purpose of this paper is to examine the effect of three groups of characteristics: organisational, technological, and environmental on the adoption of Internet and Web based marketing activities (IWMA) in the Thai hotel industry. This paper is structured as follows: firstly, a review of the relevant innovation and hospitality literature is presented; then research hypotheses are proposed; thirdly, methodology and results are presented; and finally, discussion, implications and recommendations, and conclusions are offered.

Innovation Literature

Many different factors have been identified in previous studies as affecting technological innovation adoption in an organisation, and can be categorised into three main groups of characteristics: organisational, innovation, and environmental. Table 1 summarise factors affecting technological innovation adoption in an organisation.

Table 1: Summary of groups of factors identified from previous studies			
Authors	Groups of Factors		
	Organisational	Environmental	Innovation
Kimberly & Evanisko (1981)	X	X	
Grover (1993)	X	X	X
Iacovou et al. (1995)	X	X	X
Chau & Tam (1997)	X	X	X
Thong (1999)	X	X	X
Kendall et al. (2001)			X
Scupola (2003)	X	X	X
Seyal et al. (2003)	X		X

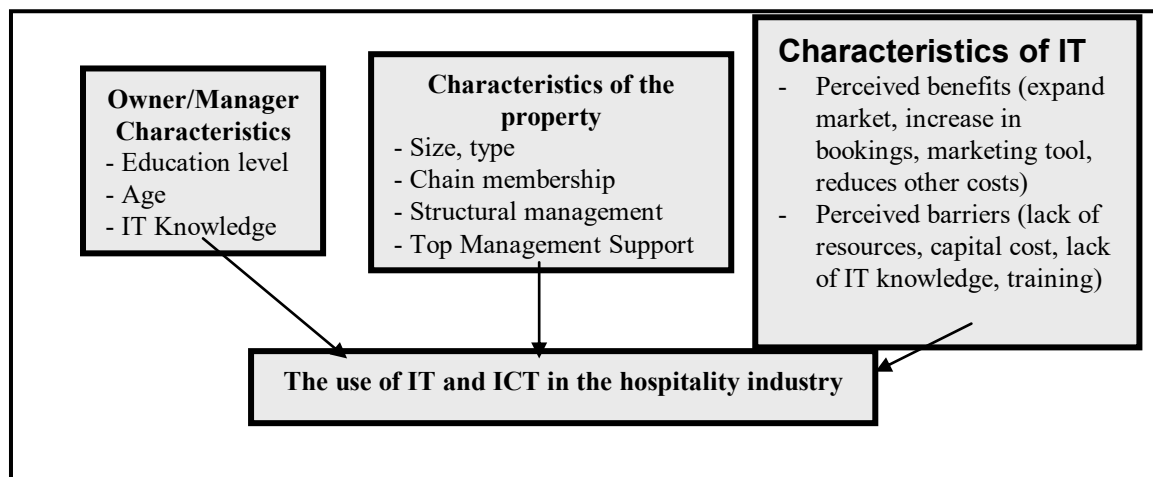
The theoretical foundation for most technology adoption research has been based on the diffusion of innovation literature (Tornatzky and Klein, 1982; Rogers, 1995; Tornatzky and Fleischer, 1990). There are five types of innovation adopters: 1) innovators, 2) early adopters, 3) early majority, 4) late majority, and 5) laggards (Rogers, 1995). Innovators are the fastest adopters while laggards are the slowest adopters. Thus, a theoretical basis for this study is found in the organisational innovation literature, through innovation theory. In this study, for the adoption of IWMA hotels have been categorised into two groups based on the extent of IWMA adoption: 1) early adopter hotels, and 2) non-early adopter hotels. Early adopter hotels have e-mail, Web site for advertising, receive online bookings, confirm bookings immediately, receive payment by a security system, and complete transactions on their Web site. Non-early adopter hotels include: hotels that have no Web site and only have e-mail; hotels that have e-mail and a basic Web page for advertising; and hotels that have e-mail and a Web site for receiving online bookings.

Hospitality Literature

Several different issues that have been investigated on the diffusion of ICTs and e-commerce in the hospitality industry are reported in the literature. These issues can be separated into three groups including: 1) characteristics of the property including *size*, *chain membership*, and *management*

structure (Siguaw et al., 2000; Paraskevas and Buhalis, 2002; Sigala, 2003; Mistilis et al., 2004), 2) characteristics of owners/ managers including *education level, age, technical expertise and training* (Van Hoof and Combrink, 1998; Van Hoof et al., 1999; Mistilis et al., 2004), and 3) perceived benefits and barriers including *perceived cost, benefits or advantages, and barriers* for the use of ICTs (Garces et al., 2004; Buhalis and Deimezi, 2004). Figure 1 summarises factors affecting technology adoption in the hospitality literature.

Figure 1: Factors identified from hospitality literature as affecting technology adoption in the hospitality industry



Sources: adapted from Khemthong et al. (2006)

Thus, a conceptual framework of the adoption of Internet and Web based marketing activities in the hotel industry was developed by utilising diffusion of innovation theory and also by incorporating those factors affecting the use of IT in an organisation; a concept readily derived from the organisational innovation and hospitality industry literature. In this study, the proposed conceptual framework incorporates three key groups of factors: organisational, innovation, and environmental (see Table 2).

Table 2: Research Variables Used for This Study	
Groups of Factors	Variables
Organisational Factors	Size of hotel
	Top Management Support
	Organisational Readiness
	CEO's attitudes
	CEO's IS Knowledge
Innovation Factors	Perceived Benefits
	Perceived Barriers
	Compatibility
	Complexity
	Image
Environmental Factors	Competition Intensity
	Customer Power
	Level of Government Support
	Level of Technology Support

Sources: adapted from Khemthong et al. (2006)

Organisational factors include the inherent characteristics of both **1) the hotel** in terms of *organisational structure* (size of hotel), and *organisational process* (top management support and organisational readiness, and **2) the decision maker** (CEO's attitudes and CEO's IS knowledge). Innovation factors include: 1) perceived benefits; 2) barriers; 3) compatibility; 4) complexity; and 5)

image, which arise from technological innovation adoption theory. Environmental factors for the organisational environment include: 1) competition intensity; 2) customer power; 3) level of government support; and 4) level of technology support, which arise from organisational environment theory.

Research Hypotheses

Organisational Characteristics

Organisational characteristics have been frequently used as a key determinant of technological innovation adoption. A number of previous studies have shown that *Business size* influences the use of the technology (Thong, 1999; Dholakia and Kshetri, 2004). Similarly, hotel characteristics, such as whether the hotel is independent or part of a chain, whether it is luxury, upscale or budget, or how large it is, have all been shown to influence the adoption of technology (Van Hoof et al., 1999; Siguaw, 2000). Several previous studies have shown that *top management support* is a significant predictor of technology adoption and leads to more successful computer use in both large and small businesses (Tan and Teo, 1998; Seyal, et al., 2003). In addition, Heung (2003) reported that “*Management support*” is an important factor for travel agencies when they decide to implement e-commerce. *Organisational readiness* in terms of financial and technological resources has also been shown to be necessary for the use of IT in hospitality organisations (Buhalis and Main, 1998; Heung, 2003). CEOs who have a positive *attitude* towards adoption of IT have been reported in earlier studies to be more likely to adopt information technology (Thong and Yap, 1995, and Seyal et al., 2003). *CEO’s IS Knowledge* has also been found to be related to adoption of IT in firms (Thong and Yap, 1995; Thong, 1999). Furthermore, Mistilis et al. (2004) reported that ICT knowledge had a strong relationship with ICT adoption in Sydney hotels.

Based on an assessment of these studies, the first hypothesis was proposed:

H1: Organisational factors of size of hotel, level of top management, organisational readiness, CEO’s attitude, and CEO’s IS knowledge have an effect on the adoption of IWMA in the Thai hotel industry.

Innovation characteristics

Innovation characteristics are widely and frequently used as a key determinant of innovation adoption. As mentioned earlier, Rogers (1995) identified the five attributes of an innovation that can influence innovation adoption: 1) relative advantage, 2) complexity, 3) compatibility, 4) trialability, and 5) observability. Several prior studies have shown that *relative advantage* or *perceived benefits* was the best predictor of the adoption innovation (e.g. Iacovou et al., 1995; Kendall, et al., 2001). Similarly, *compatibility* was found in many studies to be associated with the adoption of innovation (e.g. Thong, 1999; Seyal et al., 2003). Rogers (1995) noted that the complexity of an innovation is negatively related to its rate of adoption. O’Connor and Frew (2004) reported that *ease of use* is an important factor for the hotel industry in the adoption of electronic channels of distribution. Also, Anckar and Walden (2001) found that barriers in terms of *lacking financial resources*, *lacking IT knowledge*, *resistance to change* and *location in peripheral regions* each had an effect on the use of IT and the Internet in small and medium hospitality organisations (SMHOs). Moore and Benbasat (1991) suggested that *image* associated with users of information technology (IT) and IT itself is an important determinant of the adoption decision.

Based on the above, the second hypothesis was proposed:

H2: Innovation factors of perceived benefits, compatibility, complexity, image, and perceived barriers each have an effect on the adoption of IWMA in the Thai hotel industry.

Environmental characteristics

Environmental characteristics are important factors that have also been investigated in many previous studies (e.g. Tan and Teo, 2000; Scupola, 2003). The competitive environment has been found to be associated with the adoption of IT in several studies (Scupola, 2003; Lertwongsatien and Wongpinunwatana, 2003). Buhalis and Main (1998) reported that *customer demand* is the pull factor for small and medium hospitality organisations (SMHOs) to use IT. Previous studies have suggested that a government can encourage a country's private sector to adopt e-commerce by providing supporting infrastructure, legal and regulatory frameworks, and e-commerce use directions (Kuan and Chau, et al., 2001). Government intervention and public administration were both found to be very important for the adoption and implementation of technological innovations (Scupola, 2003; Wang and Cheung, 2004). Also, level of technology support, which refers to the supporting of technological infrastructures that are easily and readily available for the use of IWMA, was found to be significantly associated with organisational innovation adoption (Tan and Teo, 2000).

Based upon these, the third hypothesis was proposed:

H3: Environmental factors of customer power, competitive intensity, level of Government support and level of technology support have an effect on the adoption of IWMA in the Thai hotel industry.

Methodology

Following an extensive review of the innovation and hospitality literature exploratory in-depth interviews were conducted with managers of hotels in Thailand to place the findings from the literature review into the Thai context. A questionnaire survey was then selected as the main method for data collection on which to test the three hypotheses.

As there was no previous research on the adoption of Internet and Web based marketing activities by the hotel industry in Thailand has been reported in the literature, exploratory research was employed to explore the local context. Therefore, during the months of September and October 2004, in-depth semi-structured interviews (exploratory study) were conducted at each of six hotels in Thailand. Each interview took approximately one hour to complete. Participants were two general managers, one executive assistant manager, three marketing managers and one front office manager. The in-depth interviews questions were designed to determine:

- General information about firm demographics;
- Main reasons and problems influencing the adoption of Internet and Web based marketing activities in the hotel industry in Thailand;
- Benefits and cost of Internet and Web based marketing activities adoption in the hotel industry in Thailand;
- Environmental factors in Thailand that support the use of the Internet and Web based marketing activities.

The results of these interviews (e.g. opinions, suggestions, and experiences) provided direction as to what factors were imperative for the hotel industry, and these were used to supplement the findings from the literature review in the design the survey questionnaire.

Hotels selected for this study were identified utilising the definition of hotels from the Thai Hotel Association's Directory (2003-2004). The term of "Hotel" as used by the Thai Hotel Association includes hotels, motels, inns, and resorts that have a hotel licence, provide guest accommodation, and meals and beverages through a coffee shop, restaurant, or club. This study focused on the hotels located in three cities in Thailand, Bangkok, Phuket, and Chiang Mai. These regions were chosen because they are tourist destinations, and had both a sufficient number and variety of suitable hotels for this study. There was a total population of 327 hotels in the three areas of Thailand (Directory of Thai Hotel Association,

2003-2004). Due to the relatively small population, this study surveyed the entire population thereby providing data that were not only accurate but also precise (Zikmund, 2003).

The quantitative survey, which was selected as the main method of data collection for this study, was conducted in May 2005. The package sent to the hotels in the sample contained three items: a covering letter, one copy of the questionnaire, and a prepaid reply envelope was mailed to each of the 327 general managers of the hotels in Bangkok, Phuket, and Chiang Mai in Thailand. The cover letter explained the purpose of the survey and asked the general manager to return the completed questionnaire within three weeks in the prepaid reply envelope. In order to increase the response rate, a follow-up procedure was also employed in this study that involved a second mailing of questionnaires to those hotels that had not responded within the three weeks. The first mailing yielded 102 responses and from the second mailing 50 more responses were received. In the end, nearly half (152) of the questionnaires were completed and returned after two mailings. This represented a response rate after two mailings of 46.5% (152/327), which is an acceptable percentage response rate (Cavana et al., 2001).

The questions in the survey questionnaire were designed with a closed format. Dichotomous scales and categorical scales were used for the questions regarding hotel characteristics and hotel respondents. For questions on the issues regarding the factors affecting the adoption of IWMA in the hotel industry, respondents were asked to rate the extent of their agreement or disagreement with the statements provided on a seven-point Likert rating scale, ranging from 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neither disagree nor agree, 5 = slightly agree, 6 = agree to 7 = strongly agree. The full questionnaire is provided in Appendix I.

In order to ensure that the instruments developed for this study were precise and accurate measurements, it was necessary to assess the "goodness" of measures. A pilot study was conducted in April 2005 with 20 respondents who were hotel general managers, owners, and marketing managers in Thai hotels in two tourist resorts in Thailand, Pattaya and Hua-Hin. This was done after correcting the questionnaire by using the comments and feedback from the preliminary pre-test with 19 research professionals at Victoria University.

In addition, two forms of statistical analyses were used to test instrument validity: Alpha Internal Consistency Reliability, and Common Factor Analysis. The reliability coefficients for the alpha internal consistency reliability test, with the exception of that for *organisational readiness*, met Nunnally's guideline of 0.60 and above, thus confirming reliability of the research variables. Factor analysis was used to test the validity of ideas about the items in order to decide how the items should be grouped together. Therefore, if the variable consisted of only one item, such as *size of hotel* and *CEO's IS knowledge*, it was not placed in a group by itself. The size of hotel was measured by the number of hotel rooms. Most of the factor loadings are greater than the cut-off point of 0.50 as recommended by Nunnally (1978), with the exception of only one item (item 35: barrier), the value for which was still very close to 0.50 (0.468), as shown in Table 3. Hence, dimensions of the construct were confirmed to group correctly and met the expected concepts as theorised.

Table 3: Instrument Validity by Factor Analysis (Factor loading) and Alpha Reliability Coefficient (α)		
Items	Factor Loadings	Cronbach Alpha Coefficient (α)
Organisational Factors		
Q2: top management	.892	.92
Q3: top management	.881	
Q1: top management	.861	
Q9: CEO’s attitude	.830	.78
Q10: CEO’s attitude	.815	
Q11: CEO’s attitude	.634	
Q8: CEO’s attitude	.572	
Q12: CEO’s attitude	.519	
Q22: Organisational Readiness	.799	.55
Q23: Organisational Readiness	.779	
Innovation Factors		
Q26: Benefits	.783	.91
Q27: Benefits	.759	
Q25: Benefits	.748	
Q29: Benefits	.724	
Q24: Benefits	.678	
Q28: Benefits	.636	
Q7: Complexity	.887	.83
Q6: Complexity	.850	
Q5: Complexity	.832	
Q4: Complexity	.731	
Q20: Compatibility	.779	.82
Q21: Compatibility	.748	
Q18: Compatibility	.571	
Q19: Compatibility	.541	
Q36: Barrier	.927	.74
Q37: Barrier	.912	
Q35: Barrier	.468	
Q14: Image	.875	.79
Q13: Image	.839	
Environmental Factors		
Q15: Customer	.824	.85
Q16: Customer	.768	
Q17: Customer	.754	
Q33: Competition	.823	.86
Q32: Competition	.752	
Q34: Competition	.733	
Q31: Competition	.686	
Q30: Competition	.542	
Q39: Government	.928	.92
Q40: Government	.907	
Q38: Government	.885	
Q43: Technology	.835	.70
Q42: Technology	.789	
Q41: Technology	.599	

Note: The survey questionnaire is provided in Appendix 1, and the questions listed in the above table can be identified by number in Part II.

Results

Characteristics of Thai Hotel Samples

In Table 4 the characteristics of the 152 hotels and the respondents in the sample from the three cities in Thailand, Bangkok, Phuket, and Chiang Mai are summarised. The greater number of hotels in the sample in Thailand were located in Bangkok (42.8%), followed by Phuket (36.2%), and Chiang Mai (21.0%), respectively.

Table 4: Demographic of Thai Hotels and Respondents			
Hotel & Respondents Characteristics	Categories	N	%
Location	Bangkok	65	42.8
	Phuket	55	36.2
	Chiang Mai	32	21.0
Numbers of Hotel's rooms	Less than 51 rooms	24	15.8
	51-100 rooms	24	15.8
	101-150 rooms	15	9.9
	151-200 rooms	15	9.9
	201-300 rooms	38	25.0
	301-400 rooms	14	9.2
	More than 400 rooms	22	14.4
Duration of using Internet and Web technologies	Less than 1 year	8	5.3
	1-3 years	43	28.3
	4-5 years	49	32.2
	6-10 years	40	26.3
	More than 10 years	-	-
	Missing	12	7.9
Level of using Internet and Web technologies	- Having e-mail, no Web Site	4	2.6
	- Having e-mail and basic Web page	15	9.9
	- Having e-mail, own Web site, and receiving online booking	105	69.1
	- Having e-mail, own Web site, and making complete transactions	28	18.4
Position of Respondents	General Manager	76	50.0
	Marketing Manager	27	17.8
	Owner	14	9.2
	Operations Manager	2	1.3
	Front Office Manager	1	0.7
	Others	32	21.0
Education	TAFE	22	14.5
	Bachelor's	79	52.0
	Master's	41	27.0
	Ph.D.	2	1.3
	Missing	8	5.2

Source: Data drawn from survey questionnaire (part I) responses.

About one-quarter (25%) of Thai hotels were in the size range of 201-300 rooms and just less than one-quarter (23.6%) had more than 301 rooms. It seems that the majority of the Thai hotels had more than 100 rooms. About one-third (32.2%) of the Thai hotels had used the Internet and Web technologies for hotel marketing for 4-5 years. Nearly three-quarters (69.1%) of the Thai hotels had e-mail and their own Web sites which could receive online bookings, while 18.4% of the hotels had e-mail, their own Web sites, and could complete transactions. Only about 2.6% of the Thai hotels had only e-mail. Thus, it may be inferred that most of the Thai hotels were at the non-early adopter stage in their use of IWMA.

The highest level of education that Thai hotel managers had achieved was a master's degree (27%) with the greater proportion having a bachelor's degree (52%), and a smaller proportion having TAFE certification (14.5%). This implies that the majority of Thai hotel managers had a university degree. About half (50%) of the Thai respondents held the current position of general manager of their hotels, while 17.8% were hotel marketing managers. The majority of respondents were the general managers of the hotels in which they worked. Thus, the data were obtained from a sample of 152 senior managers including managing directors, general managers or marketing directors of the hotels, who make the decisions regarding their hotel's marketing activities.

Hypothesis Testing

Three statistic techniques were utilised for testing hypotheses; 1) multivariate analysis of variance (MANOVA), 2) one-way analysis of variance (ANOVA), and 3) independent sample *t*-test.

In order to ensure that there was no problem with multi-collinearity among the research variables, Pearson correlation matrix was constructed to assess the strength of the correlations among the independent variables. The presence of high multi-collinearity would make determining the contribution of the effect of each independent variable on the dependent variable difficult as it indicates that the effects of the independent variables are mixed or confounded. None of the squared correlations are close enough to 0.80 to suggest a problem with multi-collinearity among the research variables, as shown in Appendix II (Hair et al., 1998).

MANOVA was used as a preliminary analysis to find out if there were any differences in factors affecting the use of IWMA between the different groups of hotels in terms of non-early adopter and early adopter hotels. When a significant difference in the identified factors between these two groups was found, one-way ANOVA was used to follow up the analysis of MANOVA. ANOVA was used to find out which of the factors differed significantly across the groups or discriminated the groups (Field, 2005). The *t*-test was used to compare mean scores of two groups of hotels, non-early adopter hotels and early adopter hotels, in order to confirm and support the results of the one-way ANOVA.

The results of four multivariate test statistics presented in Table 5 show that the value of Pillai's trace, Wilks's Lambda, Hotelling's Trace, and Roy's Largest Root are less than 0.05 (.046), which reach the criterion for significance of 0.05. Thus from these results it may be concluded that there were statistically significant differences between non-early adopter and early adopter hotels in Thailand in the factors affecting the use of IWMA.

The results of one-way ANOVA also shown in Table 5 provide support for three groups of hypotheses: two groups for hypothesis 1 (H1.1, and H1.3), two groups for hypothesis 2 (H2.1, and H2.3), and two groups for hypothesis 3 (H3.1, and H3.3). The results show that early adopter and non-early adopter hotels were significantly different in terms of *the size of hotel, organisational readiness, perceived benefits and compatibility towards the use of IWMA, customer power, and level of Government support*.

Table 5: Hypothesis Testing by MANOVA, One-Way ANOVA, and t-test						
Factors	Non-early Adopter Hotels (N=124)	Early Adopter Hotels (N=28)	ANOVA		t-test	
<i>Organisational factors</i>	Mean		F Statistic	Sig.	t-value	P-value
H1.1: Hotel Size	3.75	5.00	9.179	.003	-3.030	.003
H1.2: Top Management Support	6.32	6.65	2.979	.086	-1.726	.086
H1.3: Organisational Readiness	5.23	5.75	4.168	.043	-2.042	.043
H1.4: CEO's Attitude	6.31	6.55	2.498	.116	-1.581	.116
H1.5: CEO's IS Knowledge	5.56	5.89	1.855	.175	-1.362	.175
<i>Innovation factors</i>						
H2.1: Perceived Benefits	5.49	6.07	6.363	.013	-2.522	.013
H2.2: Perceived Complexity	5.60	5.91	2.490	.117	-1.578	.117
H2.3: Perceived Compatibility	5.74	6.35	9.433	.003	-4.378	.000
H2.4: Perceived Barriers	4.19	4.42	.615	.434	-.784	.434
H2.5: Image	5.91	6.10	.506	.478	-.711	.478
<i>Environmental factors</i>						
H3.1: Customers Power	5.77	6.23	4.264	.041	-2.065	.041
H3.2: Competition Intensity	5.41	5.80	3.428	.066	-1.851	.066
H3.3: Government Support	4.60	5.33	4.666	.032	-2.160	.032
H3.4: Technology Support	5.99	6.25	1.996	.160	-1.413	.160
MANOVA: Pillai's Trace = .155, F = 1.789, Sig = .046 Wilks' Lambda = .845, F = 1.789, Sig = .046 Hotelling's Trace = .183, F = 1.789, Sig = .046 Roy's Largest Root = .183, F = 1.789, Sig = .046						

As mentioned the t-test was used to confirm the results of one-way ANOVA. The results of the *t*-test confirmed and provided support for three groups of hypotheses: H1 (H1.1, and H1.3), H2 (H2.1, and H2.3), and H3 (H3.1, and H3.3).

Based on the results of the one-way ANOVA, and *t*-test, it can be inferred that Thai hotels that adopted IWMA at the early adopter stage were:

- large in size;
- more likely to have higher readiness than non-early adopter hotels;
- more likely to perceive higher benefits towards adoption of IWMA than non-early adopter hotels;
- more likely to perceive higher compatibility towards adoption of IWMA than non early adopter hotels;
- more likely to have higher pressure from their customers than non-early adopter hotels;
- more likely to have a higher level of government support than non-early adopter hotels.

Discussion

Results from statistical analysis reveal insights into the key factors that influence the use of IWMA in the Thai hotel industry. Overall, the results strongly support the three main groups of hypotheses. It was found that only 18.4% of Thai hotels were at the early adopter stage. This implies that Thai hotels were still at a stage in developing the technologies for their marketing.

Thai hotels that were at the early adopter stage for IWMA were larger in size, and more likely to be more ready for the adoption of IWMA than non-early adopter hotels were. This finding is in agreement with the technological innovation literature that found that businesses that are bigger in size are more

likely to adopt IT (e.g. Thong and Yap, 1995; Thong, 1999). In addition, a number of research findings reported in the hospitality literature (e.g. Morrison, et al., 1999; Paraskevas and Buhalis, 2002; Sigala, 2003) revealed that there are differences in the performance of hotel Web sites among hotel categories and hotel sizes (small, medium, and large businesses).

In terms of organisational readiness, most of the Thai hotel managers at the non-early adopter stages were concerned about *the budget and employees' IS knowledge* as important factors to prepare for the use of IWMA in their hotels. This finding is supported by previous studies (Anckar and Walden, 2001) that found lack of financial resources, and lack of IT knowledge were factors that inhibit small and medium hospitality organisations from fully capitalising on information technology and the Internet.

In terms of innovation factors, it may be inferred that managers of Thai hotels in the early adopter stage were more likely to perceive the benefits and compatibility towards the adoption of IWMA more than were managers in the non-early adopter hotels. This finding is in agreement with the technological innovation literature that found that *perceived benefit* was the best predictor of the adoption of innovation (e.g. Rogers, 1995; Iacovou et al., 1995; Kendall, et al., 2001). In addition, this finding supports Rogers' suggestion that compatibility of an innovation with a previously introduced idea can influence the adoption of innovation. In addition this finding is in agreement with previous studies (Moore and Benbasat, 1991; Tan and Teo, 2000; Seyal et al., 2003) that have shown that *compatibility* is associated with the adoption of innovation in an organisation.

In terms of environmental factors, it may be inferred that managers of Thai hotels at the early adopter stage considered that customer power and level of government support were the push factors for their hotels to use IWMA rather than for non-early adopter hotels. The finding is consistent with other studies (Buhalis and Main, 1998) that reported that *customer demand* is the pull factor for SMHOs to use IT. Specifically, Yeh et al. (2005) found that business travelers had positive perceptions and needs for hotel e-commerce and IT applications. In terms of the level of government support, this finding is supported by previous studies that found that government intervention and public administration were very important for the adoption and implementation of technological innovations (Iacovou et al., 1995; Tan and Teo, 2000; Scupola, 2003).

Implications and Recommendations

This study has provided evidence that technological innovation theories can be successfully applied to the study of adoption of IWMA in the context of the Thai hotel industry. The proposed model for the adoption of IWMA should provide guidance for Thai hoteliers to evaluate and improve the use of Internet and Web based marketing activities. The results of this study can be used as a guideline for future research in the hotel industry for the examination of the phenomenon in other Asian country settings.

For practitioners or hotel managers, this study highlights the importance of organisational readiness, customer power, and level of government support in influencing the adoption of IWMA in Thailand. Hotel managers should consider their organisational and environmental readiness for the use of IWMA. This study shows that organisational readiness in terms of IT skills and knowledge plays a major role in influencing the development of use of IWMA in the Thai hotel industry. Most hotels at the early adopter stage were more ready for the use of IWMA than hotels at the non-early adopter stage since they gave their staff formal training before adopting IWMA. Hence, further training that focuses on IT knowledge is required and important for employees at non-early adopter hotels to increase their use of IWMA. However, managers of early and non-early adopter hotels should develop their employees' IT skills and knowledge to be in place ready for the competition in a current environment. It is also suggested that in order to enhance their competitiveness, extend their reach to their target customers, and meet the needs of consumers, hotel managers should continuously monitor customer demand and changes in the market using IWMA.

For policy makers, based on the findings of this study, it is suggested that hoping to be a leader in the tourism industry, the Thai government should increase its attention on improving the technology to make it more advanced and to support resources for industries to connect together. The Thai government should make a contribution to the greater use of the IWMA in the Thai hotel industry through promulgating English language knowledge and computer education, improving infrastructure, opening free trade of service providers, and promotion of the Thai tourism industry.

Finally, four limitations of this study should be mentioned. Firstly, the scope of this study was limited by its population frame, which included hotels in only three cities in Thailand. The sample used for analysis for each level of using the IWMA drawn from the hotel population in the three areas was relatively small. Future research, therefore, should expand on the present study by using samples of hotels located in other areas or countries with varying environments. Secondly, data for this study were collected by the key informant approach. Although using hotel managers or marketing managers as key informants is adequate for producing reliable and valid data (Tan and Litschert, 1994), a future study on the adoption of Internet and Web based marketing activities in the hotel industry could attempt to use multiple informants to obtain a fuller picture of data, and overcome biases that stem from the use of single informants. Thirdly, in terms of instrument design, two of the variables: *image and organisational readiness* used fewer than three items for measurement, weakening the reliability of the instrument. Future studies should expand these constructs with more items increasing the validity and reliability of the instrument. Finally, in terms of rate of adoption, it was difficult to measure directly the rate of adoption. For this survey, the data regarding the year of adoption of IWMA by the hotel participants was not completed. Most hotel managers answered that they could not remember, or they did not work at that time. As a result, the data were missing. It is suggested that longitudinal studies could be conducted.

Conclusion

This study has examined the factors affecting the successful adoption and implementation of Internet and Web technologies in hotel marketing in the Thai hotel industry. It concludes that there are three main groups of factors affecting the adoption of IWMA in the Thai hotel industry including 1) organisational in terms of *size of hotel, and organisational readiness*, 2) innovation factors in terms of *benefits and compatibility*, and 3) environmental factors in terms of *customer power, and level of government support*. Benefits and compatibility towards the use of IWMA were the major facilitating factors, whereas lack of IT skills and knowledge was an inhibiting factor for the use of IWMA. Specifically, customer demand was the push factor for Thai hotels in the use of IWMA. Issues relating to the level of Government support play a major role in influencing the development of use of IWMA in the Thai hotel industry.

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Appendix 1

Survey Questionnaires: “Internet and Web Technologies in Hotel Marketing”

Part I: Background Information

The questions asked in this section will be used for classification purposes only. The information gathered will not be used in any other way and will be kept strictly confidential.

1. **Name** of organisation (hotel): _____
2. Is your hotel an independent or chain hotel? () independent hotel () chain hotel
3. How many rooms does this hotel have? _____
4. Date of completion of survey: **Date** (_____) **Month** (_____) **Year** (_____)
5. **How many years** have you worked in hotels? _____ **years.**
6. Your current **position** in this hotel: _____
7. **How long** have you held your current position? _____ **years.**
8. **How many full-time employees** does your hotel currently employ? _____
9. When was this hotel opened? **Month** (_____) and **year** (_____)
10. Has your management company operated this hotel since opening? () **Yes** () **No**
If no, who was the previous management company? _____
And when did the previous management company open this hotel? _____
If yes, go to the number 11.
11. Does your hotel use the Internet and Web technologies in its marketing activities?
 () **Yes** () **No**
If yes, please indicate your hotel Web site address (URL) _____
And your e-mail _____
If no, go to the next section (part 2)
12. When did your hotel start using the Internet and Web based marketing activities?
Month (_____) and **year** (_____)
13. Please rate the level of Internet and Web technologies adoption in your hotel marketing:
 (please place a checkmark (X) in the one bracket that is closest to your situation)
 () *There is only e-mail, no Web site*
 () *Have e-mail and use travel Web pages for promoting and advertising (Basic Web Page)*
 () *Have e-mail and hotel's own Web site for receiving online selling and online bookings*
 () *Have e-mail and hotel's own Web site for receiving online bookings, completing transactions and receiving payment via security system on the Web site.*
14. How did you find out about how to use the Internet and Web based marketing activities in hotels?
 (Irrespective of how much you know, you can refer to the range of sources that you have learned from: e.g. University course, working in a hotel, friends, media etc, and comment on their usefulness).

Part II: Factors affecting the adoption of Internet and Web based marketing activities in the hotel industry

Please indicate your level of agreement or disagreement with each of the following statements. For each statement below, please **circle** the number that best describes your view.

Level of agreement or disagreement

7 = Strongly Agree
 6 = Agree
 5 = Slightly Agree
 4 = Neither Disagree nor Agree
 3 = Slightly Disagree
 2 = Disagree

Top Management Support for Internet and Web based marketing activities	Strongly Disagree		Neither Agree Nor Disagree			Strongly Agree	
1. Top management considers the Internet and Web based technologies as important.	1	2	3	4	5	6	7
2. Top management supports, and allocates resources for, the adoption and implementation of Internet and Web based technologies.	1	2	3	4	5	6	7
3. Top management has effectively communicated its support for the adoption and implementation of Internet and Web based technologies	1	2	3	4	5	6	7
Complexity, and difficulty in using Internet and Web based marketing activities							
4. Internet and Web based technologies are easy for my employees to use.	1	2	3	4	5	6	7
5. Internet and Web based technologies are easy for my customers to use.	1	2	3	4	5	6	7
6. Internet and Web based technologies are clear and understandable for my employees to use.	1	2	3	4	5	6	7
7. Internet and Web based technologies are clear and understandable for my customers to use.	1	2	3	4	5	6	7
Attitude towards Internet and Web based marketing activities	Strongly Disagree		Neither Agree Nor Disagree			Strongly Agree	
8. My hotel continuously updates information on its Web page.	1	2	3	4	5	6	7
9. It is very important for my hotel to organise information on its Web page to be reliable, relevant, and accurate.	1	2	3	4	5	6	7
10. It is very important for my hotel to design a web page with enough information about hotel products to satisfy customers.	1	2	3	4	5	6	7
11. All hotels will use Internet and Web based technologies <i>in the future</i> .	1	2	3	4	5	6	7
12. Using Internet and Web based technologies is a fast and efficient way to get more information.	1	2	3	4	5	6	7

Image in using Internet and Web based marketing activities

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 13. Hotels that use Internet technology are more sophisticated than those that do not. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. Hotels that use Internet technology have higher standards than those that do not. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Customers

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15. My hotel is actively involved in building and maintaining direct customer contacts. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. Customers are considered an important reason for my hotel to adopt the Internet and Web based technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. My customers demand the Internet and Web based technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Compatibility of Internet and Web based marketing activities

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 18. Using Internet and Web based technologies is compatible with the way my hotel does business. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19. Using Internet and Web based technologies fits well with the way my employees like to work. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. Use of the Internet to conduct hotel bookings is available to my customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. Use of the Internet to complete transactions is available to my customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Organisational Readiness of using Internet and Web based marketing activities

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22. My hotel gave its staff formal training in the use of Internet and Web technologies before it adopted these technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. The budget was the important factor that my hotel had to deal with before adopting Internet and Web based marketing activities. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Perceived Benefits of using Internet and Web based marketing activities

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 24. My hotel can increase sales and enlarge market share by using Internet and Web based technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. My hotel can reduce operating costs by using Internet and Web based technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. My hotel can extend market reach by using Internet and Web based technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. My hotel can improve customer service by using Internet and Web based technologies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

28. My hotel can establish strong relationships with client business partners when using Internet and Web based technologies.	1	2	3	4	5	6	7
29. My hotel can capture and analyse data quickly when using Internet and Web based technologies.	1	2	3	4	5	6	7
<u>Competition intensity</u>							
30. My hotel actively keeps abreast of new and innovative uses of technology by my competitors.	1	2	3	4	5	6	7
31. My hotel monitors its competitors' moves very closely.	1	2	3	4	5	6	7
32. My hotel has many competitors.	1	2	3	4	5	6	7
33. The rivalry between my hotel and its competitors is very intense.	1	2	3	4	5	6	7
34. Information about competitors use of the Internet and Web technologies was considered important when my hotel was making a decision to use those technologies.	1	2	3	4	5	6	7
<u>Perceived Barriers</u> of using Internet and Web based marketing activities							
35. Using Internet technology cannot reduce the costs of providing products and services to our customers.	1	2	3	4	5	6	7
36. Most of my customers are not familiar with conducting online hotel bookings.	1	2	3	4	5	6	7
37. Most of my customers are not familiar with conducting online hotel transactions.	1	2	3	4	5	6	7
<u>Government Support</u>							
38. The government endorses Internet commerce in my country.	1	2	3	4	5	6	7
39. My government is active in setting up the facilities to enable Internet commerce.	1	2	3	4	5	6	7
40. My government promotes the use of the Internet for commerce.	1	2	3	4	5	6	7
<u>Technology Support</u>							
41. Advances in Internet security technology provides for safer transactions and purchasing online.	1	2	3	4	5	6	7
42. Faster Internet access speed is important for Internet commerce in the hotel industry.	1	2	3	4	5	6	7
43. Internet technology makes doing business easier in the hotel industry.	1	2	3	4	5	6	7

Information System Knowledge

44. Please indicate your highest level of education by using a checkmark (x)

- () TAFE/ Commercial College
 () Bachelor's
 () Master's
 () Ph.D

Please indicate your level of using Internet and web technologies by circling the number on the scale with each of the following statements:

- Level of using**
- 1 = Never*
2 = Once or a few times (rarely)
3 = 1-2 times a month
4 = Once a week
5 = 2-3 times a week
6 = Once a day
7 = Several times a day

	Never			Several times a day			
	1	2	3	4	5	6	7
45. I use e-mail to communicate with my employees in my hotel.							
46. I use e-mail to contact my customers inside the country.							
47. I use e-mail to contact my customers outside the country.							
48. I use online (WWW) resources to find information relevant to hotel business.							
49. I use a computer at my hotel office.							
50. I use a computer at my residence.							

Please indicate your level of understanding of how to use the Internet and Web for marketing activities by circling the number on the scale that best describes your view.

51. I have a very good understanding of how to use the Internet and Web for marketing activities.	1	2	3	4	5	6	7
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Appendix II

Pearson Product-Moment Correlations (Thailand)														
Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Top Management Support														
2. CEO's attitude	.41**													
3. Organisational Readiness	.31**	.58**												
4. CEO's IT Knowledge	.13	.33**	.28**											
5. Hotel size (number of rooms)	.02	.09	.07	.14										
6. Benefits	.22**	.54**	.49**	.28**	.03									
7. Compatibility	.35**	.67**	.58**	.20**	-.01	.68**								
8. Complexity	.27**	.44**	.47**	.20*	.04	.35**	.53**							
9. Barrier	-.00	.01	.00	-.00	-.04	.22**	.12	.08						
10. Image	.14	.34**	.27**	.08	.04	.47**	.49**	.16*	.08					
11. Customer power	.44**	.67**	.54**	.24**	.01	.56**	.71**	.46**	.06	.40**				
12. Competition	.26**	.46**	.34**	.36**	.19*	.45**	.48**	.23**	-.00	.39**	.46**			
13. Government	.18*	.31**	.42**	.29**	.18*	.39**	.31**	.32**	-.05	.25**	.32**	.27**		
14. Technology	.31**	.39**	.41**	.25**	.08	.47**	.51**	.39**	.15	.39**	.42**	.43**	.41**	
15. Level of using the Internet	.15	.13	.21**	.11	.27**	.20*	.27**	.09	.16	.08	.20*	.15	.17*	.11

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Cross-Cultural Practice in International Corporate Governance

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Abstract

By means of the increasing global competition and internationalization of world markets, international expatriates assignments are more and more essential to successful worldwide development for many multinational corporations. Therefore, international expatriates are imperative to the survival of globe enterprises in the twenty-first century. Expatriates can become an important human resource to international enterprises or multinational operations. To facilitate business expatriates adjust to an overseas environment and work effectively, MNCs need to recognize the demographic factors those to affect cross-cultural adjustment. The main purpose of this study is utilizing Lee's (2002) model to investigate the relationship among the demographic factors and cross-cultural adjustment of Taiwanese expatriates assigned to Mainland. Also, the empirical outcomes were compared between Taiwanese expatriates located in Mainland China and United States.

In examining the significant degree of Taiwanese expatriates assigned to Mainland China, the instrument was a questionnaire survey conducted to this study. The variables of interest were measured using items Likert-type of questions, and those items are divided into seven categories. Data collected from 353 participants who have experience of post to Mainland China for international assignments. Descriptive statistics, ANOVA and T-test were employed to analyse data.

The statistical results of this study were compared Lee's (2002) research that associated with Taiwanese banking expatriates in United States. This thesis concludes with suggestions for both international enterprises or MNCs and individual expatriate who operate overseas journey in their normal path of business.

Introduction

In the current climate of rapid globalization, expatriation has been an important element of international business operations. Expatriates are able to play tremendously significant roles during worldwide assignments. Much of the expatriate management literature has focused on the management of cross-cultural adjustment (eg. Harris and Moran 1989; Black and Gregerson 1991). This focus seems justifiable when the high cost of expatriate failure, attributed to inability to adjust (Adler 1986), is considered. Expatriates are viewed to have 'failed' in their overseas assignment if they return to the

parent company prematurely. Since 1987 an open policy under the Chinese government has allowed more investment to flow into Mainland China from Taiwan, to the benefit of both countries. At the same time, Taiwan's government deregulated control over foreign exchange and this led to a rapid increase in outward investment by Taiwan's enterprises. Economic relations between Taiwan and China have developed

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rapidly. Further, following the increasing investment more and more Taiwanese enter Mainland China for business and travel (ICMEA, 2001). According to the China Travel Yearbook and the China Monthly Statistics, the number of Taiwan tourists to Mainland China during the year of 2004 totalled 3.69 million, an increase of 34.9% as compared to the same period of the previous year. Cumulative figures from 1988 to the end of December 2004 showed that 33.88 million persons travelled to Mainland China.

While organizations may perceive expatriation as an attractive method for accumulating foreign markets, they face the challenges of management of the most appropriate individuals. Thus factor contributing to the successful expatriation experience are significant to multinational corporations (MNCs). The aims of the project are: to examine the influence of demographic factors on the cross-cultural adjustment of Taiwanese managers stationed in Mainland China. This study result may assist Taiwan enterprises to operate their business efficiently in Mainland China. Also, in order to comprehend whether the demographic factors on cross-cultural adjustment apply to the entire expatriate community, the results of this study will be compared with Lee's (2002) research that related to Taiwanese expatriates located in United States.

Literature Review

Demographic Factors

According to Brett and Stroh (1995) demographic factors that affect expatriates adjustment include age, educational background, expatriation duration, gender, previous study, previous experience, previous training, marital status, and spouse.

Age

Age is a critical personal characteristic in Asian societies (Fang 1999; Worm 1997). Respect for old age is particularly emphasized by Confucianism, highlighting the building of a great character through lifelong learning and self-cultivation. Traditionally, young people in Chinese society are not considered dependable, experienced or capable of doing good business (Chan 1963). Even in Western societies, growing older may be associated with increasing maturity (Heckhausen and Krueger 1993; Van Lange et al. 1997).

Individual Ability

Many researchers have investigated the skills necessary for an executive to be effective in a cross-cultural setting (Brein and David 1971; Church, 1982; Mendenhall and Oddou 1985; Stening 1979). Bhagat and Prien (1996) have also set out several factors that affect the success of international assignments. They include individual, family and job-specific attributes as well as the host country cultural environment. Each of these corresponds with categories indicated by Tung (1981) and Hays (1971). In this study, adopt individual educational background to investigate individual ability on cross-cultural adjustment.

Expatriation Duration

Researchers such as Pinder and Schroeder (1987) suggested that the duration of stay in a host country has implications for relocated individuals to become efficient in their assigned job. Consequently, an hypothesis underlying the length of stay in a host country is that the longer they reside in a host country, the more familiar expatriates become with their jobs and working conditions, and as they become more familiar, the better their performance will become (Black 1988; Kawes and Kealey 1981). In addition, Nagai (1996) recommended that the length of stay in a host country be supposed to be a significant factor relating to successful performance.

Gender

Previous research (Anderson, Milkovich and Tsui 1981; Markham, Macken, Bonjean and Corder 1983; Markham and Pleck 1986) demonstrated that there is a tendency toward female employees being less willing to take over expatriate assignment, and the gender of employee has mainly exposed a constant standard of relationships for domestic transfer. On the other hand, a study of international transfer by Brett and Stroh (1995) indicated that there has not been a significant connection between employee gender and willingness to transfer. Moreover, contrary to the traditional prevalent corporate viewpoint and practice, results of the study by Westwood and Leung (1994) suggest that, in terms of disposition, women may often be better suited for expatriate assignments than men.

Previous Overseas Experience

Past foreign experience affects how confident an expatriate will feel in a new country, and is positively related to success in a global assignment (Bochner et al. 1986, Bochner et. al. 1971; Brein and David 1971; Church 1982; Searle and Ward 1990). Previous international experience has been recommended as a significant factor in employee adjustment during international assignments, as well as an attribute related to willingness to adopt overseas assignments. Church (1982) and Stening (1979) reported that if the previous experiences were work-related, they would facilitate the construction of precise work expectations. In contrast, if the previous experiences were not work-related, for example, previous experiences concerning study overseas, they would facilitate the construction of non-work expectations.

Marital Status

Researchers into domestic transfer of workplace and international transfers normally agree with the concept that single individuals have a higher willingness to transfer to international assignments than married individuals (Brett, Stroh and Reilly 1990). Married individuals perhaps must consider various family issues, such as the effect of children and family members on international mobility that is more fundamental anxiety than marital status.

Family Issues

The adjustment of the expatriate's spouse and family toward the foreign move is one of the most critical determinates of whether an expatriate completes his or her assignment (Black and Gregersen, 1991; Tung, 1981).

Dual Assignment

Researchers estimate that between 16 and 40 percent of all American expatriates do not complete their assignments (Mendenhall, Dunbar and Oddou 1987; Mendenhall and Oddou 1988; Wederspahn 1992; Dowling, Schuler and Welch 1994). This percentage maybe expected to escalate in the near future due to the projected increase in female expatriates and dual-career couples (Harvey 1996, 1997a, 1997b).

Cross-cultural Adjustment

Cross-cultural adjustment is generally defined as the process of adaptation to living and working in a foreign culture. It is the perceived degree of psychological comfort and familiarity a person has with the new host culture (Black 1988; Mendenhall and Oddou 1987). Several researchers have highlighted factors affecting the process of adjustment. For example, Black, Mendenhall and Oddou (1991) identified anticipatory (before-leaving) and in-country (post-arrival) factors. In addition, they noted work, interactions and general adjustment as three levels of adjustment. Feldman and Thompson (1992) identified six sets of factors: demographic variables; the extent of 'internationalness' of the job change; job characteristics variables; amount of organization support vis a vis assistance and career development; degree of difference between successive job assignments; and types of individual coping strategies. It is possible to classify factors affecting cross-cultural adjustment into two broad types; extrinsic (those relating to the organization and environment) and intrinsic factors (those relating to the characteristics, psychological and physical, of the individual. Many studies have found that the crucial problem for the expatriate is that adaptation to the unfamiliar culture than with their professional expertise (eg. Aahad and Osman-Gani, 2000; Dowling et al., 1999; McEnery and DesHarnais, 1990;

Osland, 1995). Successful adaptation and cultural adjustment not only directly influence expatriates performance but also lead to corporate success in the international stage.

Taiwanese Outward Investment in Mainland China

Since Mainland China started its economic reform and adopted an open-door policy in 1978 it has promoted foreign trade and welcomed foreign investment. Economic relations between Taiwan and Mainland China have developed very rapidly, due to strong business motivations in both societies. In the late 1980s Taiwanese outward investment mainly focused on the United States and the member countries of the Association of South East Asian Nations (Philippines, Indonesia, Thailand, Malaysia, and Vietnam). However, Mainland China became the principal country of Taiwanese Foreign Direct Investment (FDI) from 1990s.

According to Taiwan Economic Statistical Data Book in 2004 shown that Taiwanese approved outward foreign direct investment in Asian countries, which was 24.25% of total FDI and total amount of investment cases was 7981 cases from 1994 to 2004, and cases of approved outward investment in Asian countries was 1937(24.27%) cases from 1994 to 2003. By contrast, Taiwan's approved foreign direct investment (FDI) and indirect in Mainland China, which now accounts for roughly 51.98% of its total direct and indirect investment in Mainland China from 1994 to 2004, and total amount of cases was 29875 from 1994 to 2003, continues on an increasing trend. The total number of cases invested in Mainland China was fifteen times higher than the total number of cases invested in ASEAN from 1994 to 2003.

Conceptual Framework

The purpose of this research is to examine the relationship among the independent variables demographic factors and the dependent variable as cross-cultural adjustment.

The research question is: Do demographic factors (as age, gender, expatriate duration, marital status, dual assignment, and family experience) affect the cross-cultural adjustment of Taiwanese enterprises' expatriates in Mainland China?

Methodology

This research utilized quantitative methods. The questionnaire began with individual background variables: age, educational level, expatriation duration, gender, previous study, previous experience, previous training, marital status, whether accompanied by and spouse employment situation. In all cases the respondents were asked to select the relevant option among classified response alternatives.

The Research Sample

The target population of this study is 1,786 Taiwanese manufacturing firms located in Shanghai. Shanghai is the most developed city of east China and many Taiwanese investors set up their manufacturing company in here. This study used a stratified sampling procedure based on type of industry to select the sample. There are 20 different categories of industries such as food industry, plastics industry, cement industry, spin and weave, electric machinery, electric equipment and so on included in these 1,786 firms. Twenty companies were selected from each industry by using a random numbers table. Therefore, there a total of 400 firms were selected from the address book that is issued by the Straits Exchange Foundation of Taiwan. Non- responses were managed by replacement.

Procedure

Data were collected by means of a mail survey. Prior to sending the questionnaire packages a brief letter was sent to the HR manager, together with an invitation letter, questionnaire and support letter from the Straits Exchange Foundation of Taiwan inviting participation in the pilot study.

Statistics Analysis

All of statistical data analyses were performed on a PC computer using SPSS (Statistical Package for Social Science) for Windows. The analysis used descriptive statistics, T-tests and ANOVA. Descriptive statistics were used to describe the sample and inferential statistics to draw conclusions about the theoretical model.

Descriptive Statistics

Descriptive statistics were conducted for demographic factors including age, educational level, expatriation duration, gender, marriage, previous study experience, previous overseas experience, and previous training experience. It also included whether the participants lived with their own family during the overseas assignment and whether the partners of participants had job employment during the overseas assignment.

T-Test

T-test was run between cross-cultural adjustment and various demographic factors. These factors are gender, previous study experience, previous overseas experience, previous cross-cultural training.

ANOVA

ANOVA tests of mean (cross-cultural adjustment) difference were conducted for three demographic factors. The demographic factors are educational level, age and expatriation duration.

Research Results

Total of 1200 questionnaires initially mailed to Taiwanese business expatriates in Shanghai and followed-up by e-mail. Due to the limited time span of the research, mailing the questionnaire to each overseas expatriate and waiting on him or her to mail it back was considered to time consuming, hence, tracing e-mails were sent four weeks later.

Total responses were 353, but there were 22 invalid questionnaires. As a result, total response 353 minus the invalid questionnaires 22; therefore, 331 returned surveys were usable. The percentage of valid questionnaires was 27.58 percent.

Age

The sample consisted of 331 participants, 22 participants (6.6 percent) were under 30 years old. One hundred and forty nine participants (45.0 percent) were between 31 to 35 years old. One hundred and eighteen participants (35.6 percent) were between 36 to 40 years old. Twenty-six participants (7.9 percent) were between 41 to 45 years old, and 16 participants (4.8 percent) were over 46 years old.

Educational Level

There were 37 participants (11.2 percent) who held high school degree and 122 participants (36.9 percent) with TAFE or college certificates, most participants had graduated from university. There were 142 participants (42.9 percent) who held a bachelor's degree, and 30 participants (9.1 percent) who held postgraduate degrees.

Expatriation Duration

Responses indicated that 50 participants (15.1 percent) had been located in Shanghai less than 1 year. One hundred and twenty participants (36.3 percent) had been there for 1 to 3 years and 98 participants (29.6 percent) had been to Shanghai 4 to 5 years. Fifty-six participants (16.9 percent) had been in Shanghai 6 to 10 years, and 7 participants (2.1 percent) have been to Shanghai more than 10 years.

Gender

The number of female participants accounted for only 23 participants (6.9 percent) of total sample (331), while the number of male participants was up to 308 participants (93.1 percent). Taiwanese male expatriates greatly outnumbered female expatriates located in Shanghai.

Overseas Study Experience

There were 49 participants (14.8 percent) who had obtained their degrees while overseas, while 282 participants (85.2 percent) had not.

Previous Overseas Experience

There were 279 participants (84.3 percent) who had never had overseas experience, while 52 participants (15.7 percent) had had overseas experience.

Previous Cross-Cultural Training

There were 99 participants (29.9 percent) who had had previous cross-cultural training before being posted to Shanghai for their international assignments, but 232 participants (70.1 percent) had never had previous cross-cultural training.

Marital Status

There were 95 participants (28.7 percent) who were single, 232 participants (70.1 percent) who were married, and 4 participants (1.2 percent) who were de facto. **Spouse's Living Status**

There were 128 participants (38.7 percent) who had their spouse living with them during the overseas assignment, while 203 participants (61.3 percent) did not have their spouse accompanying them.

Partner Employment

There were 50 participants (15.1 percent) whose spouse had also received an overseas assignment, while 281 participants (84.9 percent) had spouses who did not.

Individual factors may perhaps result in expatriates experiencing different degree of cross-cultural adjustment owing to the effect of different emotional status and physical reactions, and they may learn different things from the experiences. This section discusses how individuals factors: age, educational levels, expatriation duration, gender, overseas study experience, previous overseas experience, previous cross-cultural training, and marital status of Taiwanese expatriates as well as partner-employment situation impact on cross-cultural adjustment (Table 6.1).

Table 6.1: The Significance of the Relationship of Each Demographic Factor to Adjust in Mainland China

The Significance of the Relationship of Each Demographic Factor to Adjust in Mainland China	
	Mainland China
Age	Significant
Educational Levels	Significant
Expatriation Duration	Significant
Gender	Not significant
Overseas Study Experience	Significant
Previous Overseas Experience	Significant
Previous Cross-cultural training	Significant

Marital Status	Significant
Partner Living With Status	Significant
Partner Employed Situation	Significant

This section considered the reaction on cross-cultural adjustment of attributes of individual Taiwanese expatriates: age, educational level, expatriation duration, gender, overseas study experience, previous overseas experience, previous cross-cultural training, martial status and the employment situation of the partner. According to the summarized result as table of above demonstrates that differences in almost every individual factor significantly affected the cross-cultural adjustment of Taiwanese expatriates who were assigned to Mainland China. The only exception was gender section. Straightforwardly, the cross-cultural adjustment of Taiwanese expatriates assigned in Mainland China only unaffected by gender factor, the others factors certainly affect the cross-cultural adjustment of Taiwanese expatriates assigned to Mainland China.

Discussion

The results of this study were also compared with Lee's (2002) research shown in Table 7.1. Results were quite different between Taiwanese located in the United State and Mainland China. Each signal factor is precisely clarified in the following section.

Table 7.1: The Significance of the Relationship of Each Demographic Factor to Adjust in Mainland China and the United States

The Significance of Factors Adjust in Mainland China and U.S.		
	Mainland China	United States *
Age	Significant	Not-significant
Educational Levels	Significant	Not significant
Expatriation Duration	Significant	Not significant
Gender	Not significant	Not significant
Overseas Study Experience	Significant	Not significant
Previous Overseas Experience	Significant	Not significant
Previous Cross-cultural training	Significant	Not significant
Marital Status	Significant	
Partner Living With Status	Significant	Not significant
Partner Employed Situation	Significant	Not significant

Source: Lee, H.W. 2002, '*A study of Taiwanese banking expatriates in the United States*', Published dissertation of University of Idaho

Age

Taiwanese expatriates in the age range from 31 to 35 were extensively post to Mainland China. In addition, according to the statistical results presented there was a significant difference between different age levels on cross-cultural adjustment. Comparison with Lee's (2002) research is shows a difference between Taiwanese located in the United State and in Mainland China. The age section of Lee's (2002) results indicated that almost half (n=26, 49.1%) of participants were from 41 to 45 and 39.6% participants over 45. Clearly, Taiwanese expatriates assigned to the United States were largely aged over 40 years old. There was no significant difference between different age levels on cross-cultural adjustments.

As a result, it is clear that age is an important factor for Taiwanese expatriates located in Mainland China, because different age groups demonstrate different degrees of cross-cultural adjustments. However, age was not a significant factor affecting cross-cultural adjustment of Taiwanese expatriates placed in the United States.

Educational Levels

Based on the ANOVA statistical analysis the result was that there were significant difference between different educational levels on cross-cultural adjustment in this study, and 142 (42.9%) participants had graduated from university. This was an interesting finding. The results showed that Taiwanese expatriates located in Mainland China who held different level of educational qualification showed different degrees of adjustment to their overseas placement. By contrast, Lee's (2002) research revealed that 35 participants (66%) held graduate degrees, and none of the participants had an educational level of junior college or lower, but there was no significant difference between different educational levels on cross-cultural adjustment.

Expatriation Duration

According to statistical analysis there was a significant difference between different periods of expatriation duration on cross-cultural adjustment. The majority participants had 1 to 3 years (36.3%) experience, and 4 to 5 years (29.6%) experience in this study. As a result, an essential assumption about the duration of stay in a host country is that the longer expatriates stay in a host country, the more familiar expatriates become with their jobs and working conditions, and as they become more familiar, the better their performance will be. However, Taiwanese expatriates post in the United States had diverse opinions as most participants had less than 1 year (22.6%), and 1 to 3 years (35.8%). Moreover, there was no significant difference between different expatriation durations on cross-cultural adjustment for Taiwanese expatriates placed in the United States.

Gender

There were 308 male participants assigned to Mainland China and only 23 (6.9%) female expatriates in this study. Lee's (2002) gender results revealed just 15% female expatriates located in the United States as well.

The T-test analysis performed to evaluate the cross-cultural adjustment of male expatriates as opposed to female expatriates, revealed that there was no significant difference between males and females on cross-cultural adjustment in this study. Lee's (2002) research confirmed this finding.

Overseas Study Experience and Previous Overseas Experience

This study demonstrates that previous international experience is positive factor for expatriate adjustment. The test result showed there was a positive relationship between obtaining an overseas degree and cross-cultural adjustment. Conversely, Lee's (2002) published research revealed that there was no significant difference between obtaining a degree in the United States and not obtaining a degree in the United States on cross-cultural adjustment. There was also no significant difference between having had overseas experience and not having had overseas experience on cross-cultural adjustment for Taiwanese expatriates located in United States. As a result, overseas experience, both study experience and work experience, were crucial factors influencing cross-cultural adjustment for Taiwanese expatriates located in Mainland China, but not for the United States.

Previous Cross-cultural Training

According to the results of the T-test in this study there was a significant difference between expatriates having previous cross-cultural training and not having previous cross-cultural training on cross-cultural adjustment in this study. Although only 29.9 percent of participants receive a cross-cultural training from their enterprises before taking up their overseas assignments this does not mean that cross-cultural training is not necessary for Taiwanese expatriates assigned to Mainland China. In contrast, Lee's (2002) research revealed almost half (49.1%) of the participants had previous cross-cultural training, but the other half (50.9%) of the participants did not. Interestingly, there was no significant difference

between having had previous cross-cultural training and not having had previous cross-cultural training on cross-cultural adjustment for Taiwanese expatriates posted to the United States.

Marital Status and Partner Living Status

In this study, descriptive statistical analysis revealed that 70.1% of Taiwanese expatriates were married. ANOVA statistical analysis revealed that there was a significant difference between different marital status on cross-cultural adjustment. Of the respondents 38.7% Taiwanese expatriates had their spouse living with them, and T-test statistical analysis revealed that there was a significant difference between living with spouse or partner and not living with spouse or partner during overseas assignment on cross-cultural adjustment. Lee's (2002) research related to Taiwanese banking expatriates in the United States revealed in the marital status section that all of the participants were married. It is therefore difficult to analyse the marital status factor affected the cross-cultural adjustment of Taiwanese expatriates located in the United States. Contrary to the present study, Lee's (2002) research demonstrated that there was no significant difference between living with a spouse and not living with a spouse on cross-cultural adjustment. Accordingly, marital status and living with spouse or partner were important factors influencing on cross-cultural adjustment for Taiwanese expatriates located in Mainland China, but not for Taiwanese expatriates placed in the United States.

Partner Employment Situation

According to the statistic results indicated that there was a positive relationship between working with spouse or partner during the overseas assignment and cross-cultural adjustment in this study. Nevertheless, Lee's (2002) research demonstrated that there was no significant difference between working with spouse and not working with spouse on cross-cultural adjustment. The result in dual employment is in opposition to that of this study. Hence, dual employment was an essential factor to affecting cross-cultural adjustment for Taiwanese expatriates located in Mainland China, but not for Taiwanese expatriates placed in the United States.

Conclusion

Several individual-level factors are believed to influence cross-cultural adjustment. In this study, the questionnaire began with individual background variables: age, educational level, expatriation duration, gender, previous overseas study, previous overseas experience, previous training, marital status, spouse living with status and spouse employment situation. In all cases the respondents were asked to select the relevant option among classified response alternatives. Each individual factor was significant for different levels of cross-cultural adjustment of Taiwanese expatriates assigned to Mainland China, exclusive of gender. However, Lee's (2002) research revealed that whole individual factors were not significant different on cross-cultural adjustment of Taiwanese expatriates posted to United States, but not included the marital status due to all of Taiwanese expatriates located in the United States married. It was therefore difficult to recognize a difference in cross-cultural adjustment between married and unmarried expatriates. Consequently, from the compared result that is not difficult to figure out there is a reappearance of interest in the experiences of people who work in other cultures. International organizations should put more attention on the procedure of selection expatriates and previous training before assign expatriates to perform their global assignments.

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