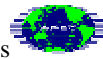


**THE CHALLENGES AND THE OPPORTUNITIES OF
E-COMMERCE AND INTERNATIONAL SMEs: IMPLICATIONS
FOR HRM IN APEC**

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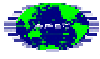
ABSTRACT

Not all SMEs are the same when it comes to contributing to growth. OECD research suggests that over 60% to 70% of economic growth and growth of employment seems to come from about 10% of SMEs; the “entrepreneurial engine”. These SMEs are characterised by fast growth. Growth rates of 50% pa or more are not uncommon amongst such firms, and such rapid growth poses special HRM challenges. The emergence of the Internet economy (or E-commerce) is now opening up significant growth opportunities for some SMEs. To take advantage of these opportunities, SME managers face another set of challenges - they need to be “born global” and to be able to grow globally, they need to understand the new E-economy and to be able to access the technology of the internet, and they need to be able to access the finance necessary to grow quickly. The biggest HRM challenge is at managerial level.

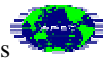
APEC is not homogenous; - of the 40 million or so SMEs in APEC, those best positioned to take advantage of the window of opportunity offered by E-commerce tend to be located in the more developed economies. The western, or Asian, half of APEC is still struggling with the financial market problems and recession, while USA and Australia are growing strongly. The USA in particular seems to have established something of a virtuous circle of growth, much of it based on the “entrepreneurial engine”, while most the Asian economies are struggling to swim away from a whirlpool of debt and recession. It is important to the longer term success of APEC, and to continued political support of APEC objectives, that Asia restart its entrepreneurial engine, and is not left behind in taking advantage of the window of opportunity offered by E-commerce. The potential for internationalised SMEs to add to the APEC economy should not be underestimated. Estimates by the author suggest that greater structural integration of APEC economies (offered by E-commerce and reduction of tariff and non tariff barriers) will allow SMEs to increase their contribution to the APEC economy *relative* to larger firms, and bring it more in line with that typically found in integrated economies. Available evidence suggests that there is the potential for SMEs to add about \$1 trillion in trade and about \$150 billion in FDI per annum to the APEC economy if structural changes allow a simpler, more business friendly, more integrated APEC economy to emerge.

What can APEC do to help SMEs, especially those in Asia, take advantage of the opportunities offered by E-commerce? This paper seeks to address this question by:

1. briefly revisiting work on the entrepreneurial engine;
2. outlining estimates of the potential economic benefits offered by SMEs via greater economic integration and E-commerce in APEC;
3. reviewing what APEC is doing with respect to E-commerce and SMEs;



4. outlining the HRM challenges associated with fast growth internationalised, E-commerce SMEs;
5. examining some suggested options for initiatives to meet these challenges and realise the potential gains.



1. THE ENTREPRENEURIAL ENGINE IN APEC

At a micro level, much of the debate on the contribution of SMEs to growth has focussed on large versus small. This misses the point. Not all SMEs are equal when it comes to contributing to growth. At a macro level it has been known for a long time that most economic growth is attributable to TFP (total factor productivity) improvement, not increased inputs.

Box 1 Schematic summary of the contribution of SMEs to development

Source of contribution	overall contribution	SME and SME FDI contribution
Conventional Engine		
<i>Supply side – production</i>		
Increased factor input		
capital investment	about 25%	SMEs contribute about 40% - 60% of this. SME FDI contribution is usually small but probably can be increased by several orders of magnitude.
labour	about 10%	SMEs have no major impact, but may increase effective use of labour force
intangible investment	about 40%	SMEs employ around 40% to 60% of the workforce, so they have a major potential impact on training. SME FDI is a major source of technical training and productivity improvement.
Productivity	about 25%	SMEs probably contribute about half of this. SME FDI is an important source of technology transfer and catch up.
<i>Supply side - savings</i>	necessary for investment	SMEs employ over 50% of the workforce and are an important source of funds. SME FDI is a small but useful source of investment funds.
<i>Demand side</i>		
Domestic		SME wage payments make up over half of GDP, so SME growth is important in domestic demand expansion.
Export		SMEs contribute about 35% or so of exports in the Asian region, so they make a major contribution to this growth engine. SME FDI is usually export oriented, so it increases the potential for exports.
Entrepreneurial Engine		
Fast growth firms		Most SME contribution to growth is focussed in a relatively small proportion of fast growing firms which start up and expand.
Adaptability and technology		SMEs receiving FDI generally have higher growth rates... ...a higher propensity to apply technology and training
Flexible exports		...and a greater willingness to increase exports and to internationalise

Source UNCTAD 1998



Although there are few attempts to decompose this TFP improvement by size of firm, SMEs are generally assumed to contribute little because their average productivity is only one third to one quarter of large firm productivity. Again, this misses the point. Box 1 summarises the contributions to growth from a conventional engine point of view, where growth depends on demand pull and supply push. As illustrated in box 1, SMEs have the potential to play an important role in growth. SME FDI (foreign direct investment) is important because E commerce makes it easier for small firms to form cross border alliances and share technology.

Not all SMEs are equal when it comes to contributing to growth. OECD research suggests that over 60% to 70% of economic growth and growth of employment seems to come from about 10% of SMEs; the “entrepreneurial engine”. These SMEs are characterised by fast growth. Growth rates of 50% pa or more are not uncommon amongst such firms, and such rapid growth poses special HRM challenges.

Growth seems to be best explained by an interplay of three parts of the economy.

1. Small firms and start ups.

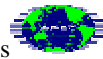
There are many SMEs, - typically firms with less than 100 employees make up over 95% of all firms, and most of these have less than 5 employees. Most of these firms do not grow much, - they are best envisaged as small stores and “lifestyle “ businesses - and although they often grow quickly (eg from one to two or four employees) this is not sustained. There is considerable “churning” of the population, so many only survive for 5 to 8 years or so. This means that the net contribution to growth is mostly a balance between exits and start ups. This balance changes for cyclical and structural reasons, but usually the addition of new SMEs contributes about 30% of net growth at the most.

2. Fast growth Firms

Some firms are growth oriented - and successful in growing. As a proportion this is only small; perhaps 20% to 25% of all SMEs are serious about seeking growth, but only 5% are successful in actually achieving sustained growth. These firms seem to contribute around 70% of all net job growth, though their contribution to value added growth may be less. These firms are not necessarily SMEs, and may be a part of a larger company (or may be taken over to become a subsidiary of a larger company). Their growth path does not necessarily follow a consistent trajectory, and the set of high growth firms changes continuously. Many of these firms emerge from the pool of small firms as successful start ups. Their success is often enhanced by entrepreneurs stepping out of larger firms to “do their own thing”, and their success is dependent upon management skill and finance that can sustain continued growth. Many of these fast growth firms are now able to operate internationally.

3. Large firms

Large firms typically have more than 500 employees and contribute at most about 30% of job growth, although they often contribute to job reductions, depending on the



point in the business cycle, and depending on structural changes in the economy. A significant proportion of these large firms are MNCs. Large firms employ half the workforce and provide an important industrial infrastructure for start up and growth of smaller firms. Larger firms are important at increasing the efficiency of smaller firms by rationalising and providing efficient distribution channels, R & D sources and funds for development.

The entrepreneurial engine

Figure 1 schematically summarises the interaction of these three main elements of the entrepreneurial engine. All three elements are essential to entrepreneurial growth.

A second way of looking at the entrepreneurial engine is illustrated in figure 2, which focuses on the entrepreneurial engine in Asia. What this shows is that all entrepreneurs are drawn from the general population; there is a seedbed of potential entrepreneurs of about 2 billion people in Asia. Of these, about 1 billion to about 1.5 billion would be of the age that we might expect them to be able to start a business.

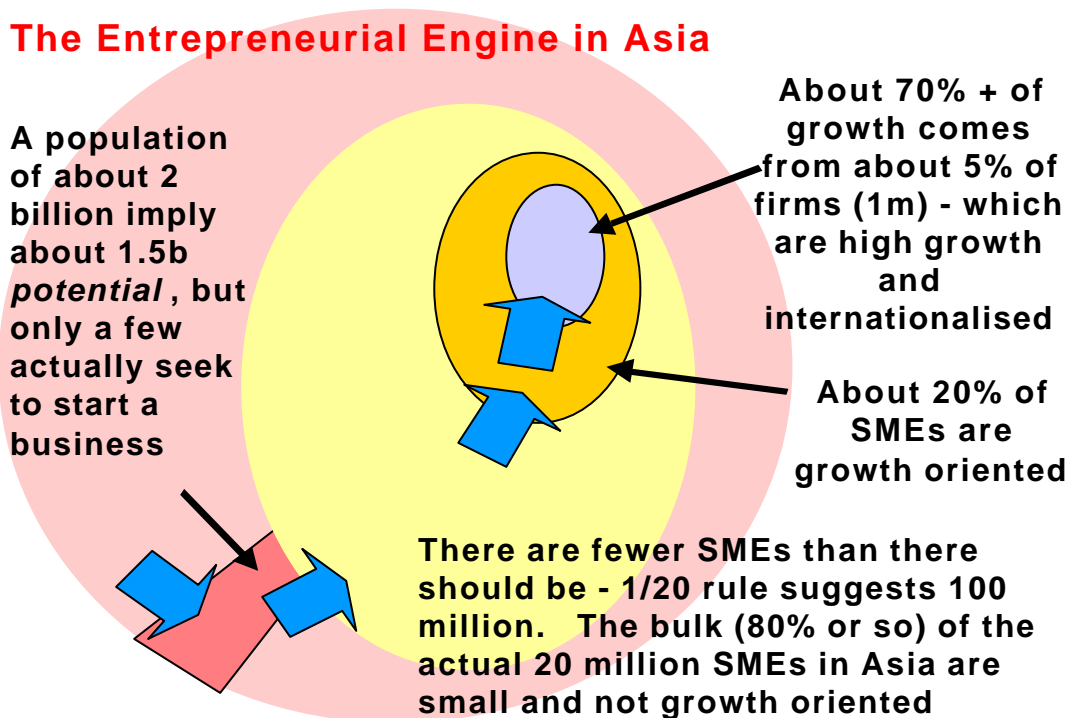


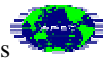
Figure 1 The entrepreneurial engine

Size and numbers	dynamics	growth contribution
Large - only about 1% of firms are large and theysurvive for longer by starting up new ventures or absorbing promising smaller firms, butthey usually make a negative contribution to job <i>growth</i> as large firms rationalise
Fast growth - only about 5% to 10% of firms succeed in achieving sustained...	...growth, surviving 8 years or more, and expanding to a point wherethey make a large contribution to job growth - probably 70%+ of all growth
Small - 90+% of firms are small with less than 100 employees	Start up rates vary from 5% to 20% pa. Most firms do not grow much above 5 employees, and most exit within about 7 years	Some contribution to job growth in conditions where start ups exceed exits - typically this occurs when cyclical and structural conditions are favourable

source: Hall (1998)

Figure 2 The entrepreneurial engine in Asia





The seedbed of the population creates a garden of SMEs. In developed economies we can expect there to be about one SME for every 20 people in the population, or about 1 million SMEs for every 20 million people. In Asia the start up rates and numbers of SMEs are less than occur in developed economies. Estimates of the number or start ups and the number of SMEs are difficult to obtain for Asia. An approximate estimate is that there are about 20 million SMEs in Asia, though many of these would be small TVEs in China. This suggests that there are probably about 100 people per SME, and that ideally there should be somewhere around four and five times as many SMEs as there are now. For historical and structural reasons the number of SMEs is much less than it should be in China, Indonesia and Vietnam.

If the garden has less plants growing in it than it should have, then we would expect less trees to grow forth. This is the case, but some parts of Asia seems somewhat further disadvantaged; there is a “missing middle”. Of the SMEs that do start, only about 20% will really be growth oriented. The rest are important politically and as lifestyle businesses, but they do not contribute much to net growth. That said, the sheer start up of SMEs in China, Vietnam, Indonesia and some other economies could be a very major source of job creation and growth in the future in those economies. Identifying which businesses are growth oriented is difficult, but a proxy is those that have succeeded in expanding from small or micro size (usually about 5 to 10 people) to a size where they are about medium sized (say 20 - 100 people), and thus have usually adopted some sort of formal management structure. In some Asian economies there is evidence of a “missing middle”. This is particularly the case for Indonesia, as illustrated by Table 1. Medium sized firms (with between 20 and 99 employees) tend to be unrepresented - they make up only 8% of output in Indonesia. This can be contrasted with similar firms contributing about 32% of output in Japan, and 41% in Chinese Taipei.



Table 1. The missing middle - Percentage contribution to output, employment and structure, by size class in selected Asian countries - manufacturing

	small and cottage <20	medium 20 - 100	large 101 - 500	very large >501	n=
Japan					41
% establishments	74	21	3	1	5,109
% output		32	19	48	
% employment		53	18	28	
Singapore					4,0
% establishments	41	42	14	3	13
% output	3	12	26	59	
% employment	5	26	27	44	
Chinese Taipei					73
% establishments	96	3	1	0	8,914
% output	25	16	20	1	
% employment	46	18	16	39	
Indonesia					1,6
% establishments	99	.8	.2	.0	00,000
% output	17	6	22	6	
% employment	67	*	*	55	
				33	
				*	

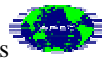
Japan: - 1992 Small Business in Japan. Manufacturing only. medium is up to 300, large is 300 +.

Singapore: -1994 Manufacturing only . Census of Industrial Production.

Chinese Taipei (Taiwan): - 1991 Census of Industry and Commerce, figures are for non agricultural sector. Micro sector is for firms less than 30 employees, small is 30 - 99 employees.

Indonesia: - estimated - Manufacturing only, 1990. Applies to formal (ie registered firms only). Estimated from BPS data and from Thee (1994) and Hill (1995) and Basri (1994). * included in large category.

In developed economies, the evidence suggests that the bulk of job growth, and probably most value added growth, comes from only about 5% to 10% of firms that are growth oriented and successful. These firms are not all SMEs, but many are small and many are part of a larger network or grouping rather than being stand alone. They grow quickly, so growth rates of 50% pa are not unusual, and they are increasingly internationalised. Identifying these firms after they have succeeded is relatively simple, but identifying them before they succeed is much more difficult; this is the essence of the “picking winners” problem facing many policy makers.



2. ESTIMATES OF THE POTENTIAL ECONOMIC BENEFITS OFFERED BY SMEs VIA GREATER ECONOMIC INTEGRATION AND E-COMMERCE IN APEC

The potential for fast growing internationalised SMEs to add to the APEC economy should not be underestimated. Estimates below that greater structural integration of APEC economies (offered by E-commerce and reduction of tariff and non tariff barriers) will allow SMEs to increase their contribution to the APEC economy *relative* to larger firms, and bring it more in line with that typically found in integrated economies. Available evidence suggests that there is the potential for SMEs to add about \$1 trillion in trade and about \$150 billion in FDI per annum to the APEC economy if structural changes allow a simpler, more business friendly, more integrated APEC economy to emerge.

We really do not know how much trade and investment is carried out by SMEs in APEC. The best available information (and that usually quoted in APEC documents) suggests that:

SMEs contribute about 30% to 35% of APEC trade, and

SME FDI probably makes up less than 10% of FDI, but higher proportion of cases.

The figures for trade are from work done by the author for the OECD, set out below. They date from nearly a decade ago now, and are based on a jigsaw of information. No more recent estimates have been made. The figure usually quoted as being an APEC figure is in fact an Asian figure - not an APEC figure, so the 35% figure for SME trade is probably an overstatement when USA and other more advanced economies in APEC are taken into account.



Table 2 Structural contribution of SMEs to exports 1991-2

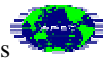
	GDP \$ US millions	Exports as per cent of GDP	Share of SMEs in total Exports %
OECD			
Denmark	121 695	27	M ~46
Finland	121 982	19	M 23
France	1 167 749	18	M 26
Greece	65 504	12	19
Italy	1 072 198	15	53
Japan	3 337 191	12	13.5
Netherlands	278 839	47	26
Sweden	280 000	25	30
weighted contribution	4.3		26.1
Non OECD			
PRC	435 000	21	40 - 60
Korea	285 000	27	40
Indonesia	128 000	23	10.6
Chinese Taipei	210 000	44	56
Thailand	108 000	29	10
Malaysia	60 000	72	15
Singapore	46 000	138	16
Vietnam	14 000	7	20
weighted contribution	11.7		35.2

Source: OECD 1997

Note: ~ indicate estimate only. M = manufacturing only. Exports are direct exports by SMEs. This understates the true contribution of SMEs to exports.

Weighted contribution. For exports is the sum of GDP multiplied by the percentage of exports multiplied by the percentage of direct SME exports expressed as a percentage of total exports. For GDP is the same figure expressed as a percentage of total GDP.

SME FDI is much more difficult to estimate - though some work has been done by UNCTAD (1998). Only two APEC economies, Republic of Korea and Japan, keep any form of statistics on FDI by size of firm. None of the other APEC members keep data on the size of the firm investing or being invested in. The only figures which might approximate SME FDI are based on approvals, not actual investment, and are based only on approvals of a given amount, say, less than \$1 million US. These can only be obtained from economies which require registration of foreign investments, and which then allow access to the data so as to allow a breakdown by size of investment. This approach does not of course guarantee that the investment is by an SME. An investment of \$1 million may be being made by quite a large firm as part of a bigger project (for example the installation of computer equipment in a refinery). Similarly many SMEs may make significantly larger commitments. What figures are then



available on “small package” inward FDI - this is based on FDI approvals of less than \$US 1 million. The key points which emerge from this are that:

- in terms of *cases*, small package FDI makes up a significant proportion, ranging from about 15% - 20% in Vietnam to over 60% in Philippines.

- however, in terms of *value*, small package FDI does not loom very large in the overall picture. It makes up as little as half a percent in Vietnam, and only about 2% to 10% by value in the Philippines. SME FDI flows from Korea make up about 20% of all outward FDI flows.

How much SME trade and investment *should* there be in APEC? This question is impossible to answer except in some very broad brush terms. Two aspects need to be distinguished:

- The first is growth of international activity by SMEs as a result of economic growth. UNCTAD evidence generally suggests that, as a rough proxy, trade grows at about double the rate of GDP growth, and FDI grows at about double the rate of trade. Other things equal, and even if SMEs remain relatively under-represented in international activity, we can expect the growth of SME trade and investment to outstrip GDP growth.

The second is a structural change in the relative importance of SMEs versus larger firms in international activity. The potential for gains here is much larger. SMEs make up only about 30% of trade and about 10% of FDI, whereas they have the potential to contribute nearly 50% of each.

Table 3 suggests that trade in APEC is likely to be about \$3 trillion per year in 2000. If GDP in APEC grows at about 4% per annum, then growth in trade can be expected to be about 8% pa, and SMEs should add about 30% of this, or about \$80 billion per year.

How much *could* SMEs contribute to trade under ideal conditions? In a fully integrated economy SMEs typically make up about 50% of economic activity; that is SMEs contribute about 50% of GDP and about 50% of investment. At present SMEs seem to make up only about 30% or so of trade. If APEC exports are expected to be about \$3 trillion in 2000 (see table 2 below), then SMEs would make up only \$1 trillion of the total (or about 30%). If SMEs were to realise their full potential, then they should contribute roughly the same as larger firms (that is about 50%, or about what they contribute in a fully integrated economy), or about \$2 trillion. This implies that if SMEs reach their full economic potential, SME exports would double, from \$1 trillion to \$2 trillion, and total export trade in APEC would expand by 30%, from \$3 trillion to \$4 trillion. To put this in perspective, an extra \$1 trillion in trade each year is more than the combined economies of Canada and Australia, and about double the equivalent of all of Asean. It would be a significant addition to the APEC economy.

**Table 3 Imports and Exports 1990 - 1997 - APEC and the World**

year	world imports \$ Trillion	APEC Imports \$ trillion	% APEC	world exports \$ trillion	APEC exports \$trillion	% APEC
1997	5.4	2.4	44	5.3	2.3	42
1996	5.3	2.3	43	5.2	2.1	40
1995	5.1	2.1	43	4.9	2.1	41
1994	4.2	1.9	44	4.1	1.8	42
1993	3.7	1.6	43	3.6	1.5	42
1992	3.8	1.5	39	3.7	1.4	39
1991	3.5	1.4	38	3.4	1.3	38
1990	3.6	1.3	37	3.4	1.2	35

Source: APEC, drawn from UN Monthly Bulletin of Statistics July 1998

Table 4 shows FDI flows in APEC. SMEs probably make up only about 10% of these (or about \$20 billion). If GDP in APEC grows at 4% then FDI is likely to grow at about 16%, so the growth of SME contributions to FDI is likely to be about \$3.2 billion.

How much *could* SMEs contribute to increased FDI in APEC under ideal conditions? SMEs typically make up about half of all investment in an economy, but across borders it is much less; SME FDI usually only makes up about 10% of FDI. Table 4 shows that in 1996, FDI flows in APEC amounted to about \$189 billion in inflows and \$166 billion in outflows. (Seen in perspective, FDI flows are less than one tenth of trade flows in APEC, but typically trade flows are growing at about double GDP growth, and FDI is typically growing at about double the growth in trade flows). About 90% of this FDI (or about \$168 billion in outflows) is probably attributable to large firms, and only 10%, or about \$20 billion in outflows, is attributable to SMEs. In an ideal world, SMEs would be contributing as much as the large firms. This would suggest that the potential is there for SMEs to increase FDI in APEC by about \$150 billion per year. To put this in rough perspective, \$150 billion is about the same as the GDP of Hong Kong China or Indonesia. In itself it would be a significant addition to the APEC economy, but FDI has strong multiplier and technology transfer benefits as well.

**Table 4 FDI flows in APEC 1996**

	FDI inflows 1996 \$m	FDI outflows 1996 \$m
Australia	6403	1343
Brunei Darussalem	9	0
Canada	6681	7543
Chile	3140	956
China	42300	2200
Hong Kong China	2500	27000
Indonesia	7960	512
Japan	220	23440
Korea	2308	4188
Malaysia	5300	1906
Mexico	7535	553
New Zealand	2928	-157
PNG	230	0
Philippines	1408	182
Singapore	9440	4800
Chinese Taipei	1402	3096
Thailand	2426	1740
USA	84629	84902
Vietnam	2156	1740
	188975	165944

source: UNCTAD World Investment Report 1997 table B

In summary, we should expect that if commitments to reduced trade and investment barriers are maintained then we can expect SMEs to add:

about \$80 billion a year to trade in APEC; and

about \$3.2 billion in FDI.

Similarly, were the APEC economies to achieve a level of integration where SMEs can move as easily across borders as large firms (in effect achieving an almost borderless economy) it would be possible for SMEs to add as much as about:

\$1 trillion each year in additional economic trade; and

\$150 billion each year in additional investment.

Clearly the main gains will come from a structural shift which would enable SMEs to operate in a more integrated APEC economy. How realistic is this?

On the one hand, it is unlikely that APEC will become a fully integrated economy in the next 20 years, at least in the sense of the moves of the European Union to full monetary union. The target might thus be discounted to reflect the political reality that even with the best will in the world, and even by 2020, economic union in APEC will be a long way off. Even so, even if the figures above are halved, they still reflect a very large potential gain which at present is being almost ignored.



On the other hand, the rapid changes brought forth by E commerce and globalisation mean that the potential for SMEs to contribute to the growth of the global or regional economy is greater than ever before. It would be particularly shortsighted to ignore this potential, and to not address any impediments that can be identified.

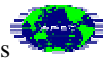
3. WHAT IS APEC DOING WITH RESPECT TO E-COMMERCE AND SMEs

APEC has two main streams of activity:

1. TILF - Trade and investment liberalisation. This is implemented by individual action plans (IAPs) put forward by individual member economies in line with broader targets negotiated by a consensual process. The main elements of these broader targets are to achieve free and open trade and investment in the region by 2010 for industrialised economies and by 2020 for the developing economies.
2. ECOTECH - Economic and technical cooperation. This is mostly implemented by means of a series of projects, undertaken by individual economies or by groups of members working together. The main goals of the ECOTECH program are to:
 - develop human capital;
 - foster safe efficient capital markets;
 - strengthen economic infrastructure;
 - harness technologies for the future;
 - promote environmentally sustainable growth; and
 - encourage the development and growth of SMEs.

There are three broad areas where APEC can contribute to SMEs:

1. *Reduce barriers to trade and investment.* Most of this TILF activity to date has focussed on tariffs and investment guidelines.
2. *Support SMEs in their efforts to become more internationally competitive.* The APEC Ecotech Agenda has a number of initiatives focussing on SMEs.
3. *Build a better business environment.* Within APEC, improving the business environment (for example, by seeking to harmonise regulations) has been largely the responsibility of working groups such as Infrastructure, Fisheries, Tourism, Trade Policy etc. SMEs are a cross cutting issue in this context.



APEC has no specific targets or objectives for SME activities, and the IAPs do not set any specific targets. The SPAN document (Integrated Plan of Action for SME Development), launched at the 1998 SME Ministerial, seeks to provide a focus for other APEC groups to refer to when reviewing their activities. The intention is to encourage a common framework for the development of SMEs though this is so broad as to be of very little use in setting priorities at economy level or at APEC level.

The APEC 1999 Blueprint for Action on Electronic Commerce sets out the role for government as being to:

- Provide a favourable environment, including the legal and regulatory environment, which is predictable transparent and consistent;
- Provide an environment which promotes trust and confidence;
- Promotes the efficient use of electronic commerce;
- Become leading edge in the use of electronic commerce.

The first meeting of the Electronic Commerce Steering Group was held in New Zealand in June 1999. The main work program focuses on:

- “Paperless trading” (actually electronic customs clearance and export documentation and payment for goods). This is left ultimately to individual action plans.
- Measurement of electronic commerce. At this stage this is limited to encouraging meetings of experts, and sharing available information.
- Researching the legal foundations for electronic commerce. This area follows work by OECD and UNICTRAL, and mostly involves holding of workshops.
- Establishing readiness indicators, so that members can evaluate their preparedness and position themselves for electronic commerce.

The APEC work complements and tracks the broader OECD work plans which cover:

- consumer protection;
- privacy protection;
- authentication and certification;
- defining and measuring electronic commerce;
- analytical work examining the economic and social impacts on SMEs;
- taxation issues;



- delivery of government services;
- trade and market access, and electronic commerce in the next WTO round;
- development cooperation.

What is APEC doing with respect to SMEs and E commerce? The short answer is nothing very specific.

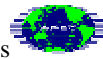
4.THE HRM CHALLENGES ASSOCIATED WITH E-COMMERCE AND SMEs

The emergence of the Internet economy (or Ecommerce) is now opening up significant growth opportunities for some SMEs. Much of the growth of China, Korea, Chinese Taipei and Japan is directly associated with the success of their SMEs. The challenge is to ensure that the next generation of SMEs can contribute to their full potential. From an APEC perspective, E commerce offers opportunities for firms, especially smaller firms, to move across borders, and to create a much more integrated and seamless business environment. To take advantage of these opportunities, SME managers face challenges - they need to be “born global” and to be able to grow globally, they need to understand the new E-economy and to be able to access the technology of the internet, and they need to be able to access the finance necessary to grow quickly. The biggest HRM challenge is likely to be at a managerial level.

No one really knows how the E commerce economy will evolve, especially in Asia where fixed line access and internet access is less common than in more anglophone economies. In some scenarios, E commerce will radically alter the way firms do business with each other, and with their customers. It will open up access to global market places, and it is already providing a flood of information and intelligence to managers and customers. In other scenarios, E commerce will essentially just replace the existing communication and transactions methods that firms use already, albeit making them cheaper and more efficient. People and firms will adapt, much as they have already to the telephone, and to TV. There is some truth to both scenarios. Most electronic commerce is business to business, and in most countries about 80% of money has been electronic for 20 years or so. In economies such as France, where Minitel has been in place for more than 15 years, E commerce has been the norm for many people, and it has not radically altered the way people do business. On the other hand it is clear that some internet based firms are growing quickly, and they are altering the ways in which we can do and do business.

We can broadly hypothesise then that E commerce will offer opportunities to firms on three main dimensions:

1. Cost reducing - eg E commerce will create opportunities to reduce costs or improve efficiencies.



2. Market enhancing - eg E commerce will allow direct access to customers beyond a local market catchment, or will allow tailoring of products and prices to specific customers.
3. Information, competitive intelligence and management enhancing - eg E commerce will allow managers to identify opportunities, to track competitors, and to build and manage alliances and global network arrangements much more effectively than hitherto possible.

The firms that can and do take advantage of all three will be the ones that contribute most to growth. APEC is not homogenous - of the 40 million or so SMEs in APEC, the firms best positioned to take advantage of the window of opportunity offered by E-commerce tend to be located in the more developed economies. It is important to the longer term success of APEC, and to continued political support of APEC objectives, that Asia restart its entrepreneurial engine, and is not left behind in taking advantage of the window of opportunity offered by E-commerce. E commerce will not benefit, or impact on, all SMEs equally. It makes sense to identify priorities, and to target scarce resources in APEC at where they will have most effect. This is the main challenge.

In terms of the entrepreneurial engine framework developed in section 1, there are about 1.5 billion potential entrepreneurs and about 20 million SME managers in Asia who need to be better informed about E commerce. This poses an almost impossible HRM challenge. However, the great bulk of about 80% of SMEs are mostly lifestyle businesses which do not grow much or contribute much to growth. E commerce will be likely have a marginal impact on most of them, and the impact will be limited mostly to the benefits passed on by larger firms and governments, for example by means of lower transaction costs and better support services.

On the other hand, the biggest opportunities, and the biggest potential impact is likely to be from those 20% or so of SMEs seeking growth, and more particularly the 5% of firms who really have the potential to succeed and make a significant net contribution to job and value added growth. As argued in section 2, the potential gains here are quite large, but they are contingent upon firms being able to take advantage of the opportunities to achieve growth by moving across borders. The challenge here is still large, - in Asia we are probably talking about 1 to 4 million or more SMEs and their managers. The challenge is not just an HRM one; there are many tariff and non tariff barriers to be addressed, and the need to develop more efficient financial markets. Asian financial markets are not yet developed to a point where they can support fast growth firms effectively.

Figure 3 summarises the HRM challenges as along a scale, defined by the entrepreneurial engine. Although all three main targets need to be addressed, it makes more sense to attach a higher priority to targeting the fast growth SME managers; it is a relatively smaller, more manageable target, and likely to lead to more immediate results.



Figure 3 HRM challenges and E commerce in APEC - Asia

about 1 - 2 billion	About 20 million increasing to about 80 - 100 million	about 1 million increasing to about 5 million
<i>General population</i>	<i>SME managers</i>	<i>Fast growth SME managers</i>
Access to internet, training on entrepreneurship, and how to use electronic communications in business and as customers	Access to internet, access to training on how to use specific aspects of E commerce relevant to their business, and on how to identify business opportunities, and manage growth should they wish to take advantage of those opportunities	Access to training on how to manage fast growth, international firms, and access to updated knowledge of opportunities associated with E commerce as it evolves

5. SUGGESTED OPTIONS FOR INITIATIVES TO MEET THESE CHALLENGES AND REALISE THE POTENTIAL GAINS.

It is tempting to suggest that APEC should actively engage in appropriate HRM training to encourage more E commerce in SMEs. However, figure 3 above, clearly shows that the task is simply too large for APEC to have much impact. What can APEC realistically do?

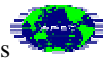
In section 2 it was argued that the potential gains from a more integrated, more business friendly APEC are large. From an APEC perspective there are two prongs of activity which are relevant to meeting the challenges associated with E commerce and SMEs.

1. The first is breaking down barriers to a more integrated economy. This TILF activity broadly breaks into tariff and non tariff initiatives.
2. The second is in providing or creating an appropriate supporting environment. This is mostly ecotech activity.

5.1 Tariff and non tariff barriers

APEC’s main activity to date has been in addressing tariff barriers. For the most part, tariff and investment barriers do not discriminate against SMEs, and SMEs will benefit in the same way as large firms with the reduction in such barriers. Where SMEs are suppliers to larger international firms they will benefit in line with the expansion of trade and investment. Where SMEs internationalise in their own right, they will also gain from the reductions in complexity and administrative burdens associated with reductions in tariffs and investment controls.

However the real gain to SMEs (and to APEC) will now come with attention to NTBs, especially reductions in non border regulatory and administrative burdens, because these pose special problems to small firms moving across borders and growing quickly. Attention to these areas will allow SMEs to expand their international activity *relative to* larger firms. This in turn means that the entrepreneurial engine will operate more effectively at an international level, and it is this that generates most of the jobs and wealth.



Box 2 - The benefits of reducing impediments to SME trade and investment

As part of the APEC technoforum feasibility study, a survey was made of advanced technology SMEs to see what initiatives would be most likely to benefit their firms. The results do not pretend to be statistically reliable (they only represent about 50 firms), but they are interesting nevertheless, if only because of the quality of the responses. Respondents were asked to indicate how helpful they would find a list of initiatives (box below). There is some commonality about the helpfulness of some issues, but on others there is wide variation. They were also asked if the package of initiatives they regarded as “very helpful” were to be implemented, then how much would that help them in expanding their international activities.

List of initiatives
APEC is a multilateral organisation which seeks to encourage more trade, investment and economic activity across borders. Please indicate how helpful each of the following initiatives is likely to be in creating a better international business environment in which to expand your business.....
*a. Faster reduction of specific tariff barriers
*b. Faster reduction of non tariff barriers (eg unnecessary regulations)
*c. Better access to government and large firm procurement for smaller international companies
d. Increased efforts to reduce inconsistencies and differences in industry and product regulations
e. Better access for small firms to large firm EDI systems
f. Better access for small firms to processes for developing industry standards for specific products
g. Better protection of intellectual property rights
h. Dispute settlement procedures more suited to the needs of smaller companies (eg faster, less legalistic)
i. Reduced restrictions on mobility of skilled staff
j. Development of regional international capital markets suited to needs of smaller international companies
*k. More direct access to APEC officials to alert them to the needs of firms in emerging industries
*l. More opportunities for display of technology and products
m. More technology exchange and cooperation programs
n. Other (please specify)

* denotes regarded as being regarded as very helpful by a clear majority of respondents.

- The initiatives regarded by almost all respondents as *very helpful* were “faster reduction of specific tariff barriers and/or non tariff barriers” (though not necessarily both together), “better access to government and large firm procurement for smaller international companies”, “more access for display of technology and products”, and “more direct access to APEC officials to alert them to the needs of firms in emerging industries”.
- For most of the other initiatives, the variation in helpfulness was quite wide - for example, for some, access to international venture capital, or standardised EDI, is likely to be very helpful, while for others these issues are of little or no importance.
- The *package* of initiatives that the respondents nominated as “very helpful” would, in their opinion, if implemented, be effective in increasing their rate of growth by somewhere between 20% and above 50%. Although some were start up business, and thus had no track record of sales yet, growth rate of turnover was between 10% and 30% pa.



It is extremely difficult to make any quantitative assessment of the relative importance of different barriers to SMEs, or of the likely effect of their removal on SME activity, simply because of the lack of any reliable empirical information in APEC. This is especially the case for NTBs, and for improvements in business infrastructure. Part of the problem is that “*administrative costs tend to be hidden. They do not usually involve actual money flows, but time lost in meeting administrative requirements.*” Netherlands Ministry of Economic Affairs (1995, p5). The OECD is currently undertaking work on the impact of NTBs and their effect on market dynamism, entrepreneurship and business activities. Work to date clearly shows that such NTBs do have a significant impact. Anecdotally, such NTBs may be responsible for 20% or so of SME costs. To the extent that these are unnecessary, and to the extent that they fall disproportionately on SMEs, they pose a significant barrier and impediment. Box 2 sets out some limited empirical evidence from APEC on the likely effect of addressing specific impediments. This suggests that the benefits may be quite large for SMEs ready to take advantage of the initiatives, and may allow them to increase their international activity by between 20% and 50%.

The problem is that we do not know what these impediments are when it comes to E commerce and SMEs, and APEC has no ongoing process for identifying them. An ad hoc project has been recommended at the Christchurch Ministerial, which requires member governments to identify impediments and report back to the next meeting in Brunei. However, because this is being done at a member economy level, and not an APEC level, and because it is a one off exercise, it is hard to see how it will really help much.

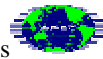
5.2 Supporting environment

The APEC SME PLG has tended to concentrate on this ecotech area. For example the SPAN document seeks to build the capacity of SMEs, and to assist in their adjustment, particularly through the key focus areas of financing, HRD, technology, market access, and access to information. “Helping your Business Grow” summarises the initiatives taken by APEC each year to assist SMEs. However most of these initiatives are ad hoc and there is no monitoring of the effectiveness or impact of them on SMEs in APEC (there is the usual process of administrative review of projects within APEC, but that is more procedural).

5.3 What can APEC do?

It is perhaps useful to first look at what APEC cannot do:

- APEC cannot engage in massive training programs, at least not on the scale required to bring the required skills and knowledge about E commerce to millions of people and managers;
- APEC is a consensus organisation, and it cannot impose conditions on member governments. It is thus not possible to adopt and enforce a comprehensive plan for implementing E commerce encryption standards for



example, nor is it possible to enforce a code of practice for E commerce consumer protection.

Given budget and political constraints, what can APEC do to increase E commerce usage in SMEs and amongst Asian SMEs in particular? From an HRD point of view, APEC is rather limited in what it can do. However it can take steps to

- facilitate private sector initiatives on enhancing E commerce:
- reduce impediments to fast growing international SMEs;
- provide indicators, benchmarks, and best practice information for members to better evaluate the rate of acceptance and penetration of E commerce.

5.3.1 Cooperate with private sector to increase access to advice on E commerce

Although APEC does not have the resources needed to make a significant contribution to E commerce HRD training, APEC can still play a useful role in cooperating with the private sector to improve access to information and training on E commerce. Two examples of initiatives which are already on the table are:

- PECC is already working in conjunction with IBM to develop and implement training programs in Vietnam and Philippines (PECC 1999);
- At the Christchurch SME Ministerial, Ministers directed the PLG to examine the feasibility of linking electronic information services for SMEs in APEC so that there is a single SME friendly entry point, and to similarly provide a single entry point for SMEs to data bases on tariff, non tariff and other requirements.

Further to these, it makes some sense to develop programs in conjunction with the private sector organisations who are active in working with fast growing SMEs in the region; venture capitalists, telecoms, ISPs and internet companies, consulting and accounting companies, etc. One of the benefits of such programs is that it gives more direct interaction between government officials and private sector executives which helps to give both sides a better understanding of the problems associated with rapid change and rapid growth.

5.3.2 Identifying and acting on impediments to E commerce

APEC *can* act as a point of focus for international business to express its concerns about unnecessary impediments to economic and social development. Business is no longer constrained by national borders. E commerce means that even small companies can operate across borders, but when they do so they are faced with impediments. Some of these impediments can be overcome if the firms have ready access to advice. Some are more intractable and unnecessary. APEC can be a focus point for identifying impediments, which in turn will help member states provide useful advice, and to respond by addressing unnecessary impediments to E commerce. ABAC is nominally



the business contact point, but it has been less than successful in being representative of business, and especially of small business.

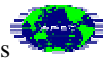
Preliminary studies suggest that it is feasible to establish a self funded notification system, in conjunction with existing business or industry organisations, such as chambers of commerce and the like. An APEC Notification System or ANS, could be:

- A mechanism to identify areas in APEC where there are unnecessary regulations or impediments (especially non tariff barriers) to the development of business;
- A mechanism to help identify practical suggestions for ways that APEC and member economy governments can develop a better business environment;
- Business initiated, sponsored and run;
- Equally accessible to large and small businesses, but providing a cost effective means for SMEs to have their voice heard in international areas;
- Non confrontationist and non legalistic - ANS need not act as a lobbyist, but might simply seek to identify problems and raise general issues.

How might it work? Individual firms could lodge a notification, which might be a specific complaint or a more general suggestion. This would be lodged with an ANS agent. A notification lodgement would cost a nominal amount, which might go partly to ANS and partly to the ANS agent. An ANS agent would usually be an industry association such as a Chamber of Commerce. Once lodged the notification would be sent on to the ANS central point. The notification could be in two parts; a part which identifies the lodging firm and agent, and a part which sets out the issues. Only the latter part need be sighted by the ANS central point; the document will be identified only by a reference code, so anonymity is provided to the lodging firm. The ANS central point could then carry out an initial brief review, and then depending on the nature of the issue it may do any or all of the following.

1. request more information and clarification, or make suggestions as to other approaches that might be adopted in dealing with the problem;
2. pass the notification on immediately to appropriate authorities in the relevant economy for their information (ANS will not act as a lobbyist);
3. refer the information to a panel of experts to review and to make general recommendations to APEC (ANS will not recommend on specific disputes or act as a lobbyist);
4. suggest to APEC that a more general review be initiated to address major issues or emerging issues.

ANS would request a response from APEC or from the relevant government. ANS could report back to the relevant ANS agent, who would then report to the lodging



firm. Each year ANS would provide a summary of the nature of lodgements and actions taken. This report would be likely to attract considerable media attention. Most of this could be done electronically and at relatively low cost. The administrative processes of the ANS could build on and complement existing facilities; it would not require any substantial new infrastructure. Preliminary feasibility studies show that its operations could be self funding, although start up would require some additional funding.

5.3.3 Better indicators on SMEs and E Commerce

Improved indicators are part of the APEC E commerce group's target activities. The APEC SME Indicators Project (Hall 1998) has shown that it is feasible to improve the quality and accuracy of information available to decision makers and policy makers, and that this can be done cost effectively. Being able to track the level of penetration and use of E commerce, and the level of E commerce training and access is important for member economies to decide on priorities for support services. At present it is almost impossible to benchmark these indicators against other economies.

Further E commerce itself might offer ways of better tracking SME activity in APEC. The emergence of electronic commerce, especially in conjunction with web based sales supported by post and courier, will have far reaching consequences for SMEs and their ability to penetrate international markets. At present it is not at all clear how the regulatory and reporting regime for Electronic Commerce will evolve. However, it seems likely that for tax purposes, all E-commerce transactions will need to be reported in some way, and in a way that links them to an identifiable entity. This offers the potential to track the participation of SMEs in E-commerce, and their role in international E-commerce.

CONCLUSION

APEC is limited in what it can do to foster E commerce, and is especially limited when it comes to HRD. However, there is a relatively narrow window of opportunity to develop a base of fast growing E commerce firms in Asia. The growth of E commerce in Asia has been impeded by the Asian slowdown, and by the lack of fixed line access to the internet. The potential gains in of a more integrated, business friendly APEC economy are large. Most of these gains will come from structural changes which increase the relative importance of SMEs in the international economy. E commerce will help achieve these gains more quickly than they would otherwise be able to be achieved, but only if APEC makes continuing efforts to

- identify and address impediments, especially at non border non tariff impediments.
- work with the business sector and private sector to make it easier for fast growth SMEs to grow quickly and internationally.



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