

Forces Shaping the 21st Century:

Globalisation

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This paper has been prepared for internal discussion as part of the START project. It reflects a range of views and it does not represent official positions of the organisations involved.

Key Messages

A. An Overview of Globalisation

Historically civilisations have always expanded and contracted. Whenever a particular regime or empire's sphere of influence has widened, either through trade or military aggression, there is an expansion, a "globalisation" of the views held by that dominant power. As this process has occurred in a number of ways over the last 3000 years at least, it is possible to say that globalisation per se, is not a new phenomenon. Since the agricultural revolution civilisations and empires in all parts of the world, have sought to "globalise" their way of life and extend their power beyond their own backyards. The Roman Kingdom in earlier history, the British Kingdom in the 18th and 19th centuries, and of course the United States in the later 19th century and now the 20th Century, all offer examples of periods of global expansion.

Although globalisation is not a new process then, the present period of expansion and interconnection taking place between the various cultures and economic centres of the world, appears to be of a size and scale previously unseen. Few if any countries are outside the present wave of globalising influence.

Dealing with the future pace and unpredictability of change is challenging. There are a number of ways of thinking about how the future will unfold. It is difficult, though, to move away from extrapolating the past – whether through trend analysis, scenario building, or simple speculation. Knowledge of past events and current conditions, and connections among them, naturally constrain thinking.

However, experience over the late 20th Century demonstrated the shortcomings of extrapolation. Each decade was seemingly shaped by sea-change events that fell outside the projections of most analysts and prevailing expectations. They included:

- Hiroshima, the first nuclear bomb in the 1940's
- The oil and energy crises of the 1970s
- The unravelling of Keynesian economic policy in the 1980s
- The crumbling of the Iron Curtain in the 1980s and 1990s
- The reach of the PC and internet in the 1990s and beyond
- The transformation of the Chinese political economy in the 1990s and beyond
- The twin towers incident in the 2000's and subsequent response to terrorism

It is not that these formative events were unpredictable or unfathomable – but that the timing and scope of the changes went beyond prevailing expectations (Bill Gates' understanding of the potential of the PC and Internet an obvious exception). Frameworks for thinking about long-term change. The conundrum is how to project discontinuity and predict the unpredictable. While this is an impossible challenge on the face of it, this paper proposes that the intersection of the two paradigms underlying the literature on economic and social development offer a framework for commencing the task; and suggest some scenarios that can be used to identify the most likely drivers from across a range of possible outcomes.

B. Potential Scenarios

Scenario 1 : The Competitive Cities / Global Economy Prediction

This scenario, largely promoted by large international corporates, suggests that cities are and will continue to be the driving force behind the world economy. Here, global firms compete locally within the new knowledge economy. Cities/regions and countries most adept at

investing and organising themselves attract the workers, investors and companies needed to fuel their growth.

Scenario 2: Sun Sets in the West – Rises in the East

Structural weaknesses and a reaction against the long-term hollowing of the US economy, and a loss of allied support for sustaining existing trade and resource relationships (oil being the obvious one), and inconsistencies in foreign policy could see a return to a more isolationist US, focusing on domestic and western hemisphere issues.

Scenario 3: The Asian Century

This is in some ways a variant on Scenario 1. China's investment in productivity, in regional integration inside and outside its borders, its embrace of free trade, deregulation and reform of financial systems under the auspices of a single party system see it sustain its boom and displace first Japan and then the US as the world's leading producers. In terms of GDP India will record the biggest jump in world rank – from 24th to 10th place – but will still account for only 3% of world trade in 2020 (The Economist, 2006).

Scenario 4: A Globe Divided

The Christian West and the Muslim East move apart, with no end to the war on terrorism. A peaceful coexistence or detente could emerge as one variant, especially as oil dependence diminishes. (This is an outcome that may be consistent with the preceding scenarios). There is acknowledgement that there is more than one end game – modernity for the west; something else for the east.

Scenario 5: The Disappearing Sovereign State

This scenario assumes that globalisation gives increasing weight to NGOs, including the World Bank, IMF, the United Nations and its various agencies, and international collaboration for “nation building”, world health and aid. International organisations will progressively harmonise the rules of trade and finance across boundaries working from regional blocs upward.

Scenario 6 : Age of Gratification

The continuation of the current path of consumerism most evident in the developed west already rapidly burgeoning in Asia and beginning to appear in parts of Eastern Europe suggests that post-modernity becomes the new modernity.

Scenario 7: Blowing Hot and Cold

Under this scenario, increasing evidence of global warming by way of sea level change, climatic shifts, and extreme weather events drives radical changes in patterns of production and consumption.

What Does This mean for Auckland?

- Globalisation may be seen as increasingly focused on cities, where the majority of the world's population now lives. However, it's not just about cities, although they are likely to exert a major influence on the future of countries – or at least how engaged countries are in the globalisation game (through their institutions)
- Cities are now regarded by many as the driving force behind the world's economy. For

others this is a simplistic statement. However, it is clear that cities are sites of activity, innovation and accumulation, etc. It is cities and not countries which are competing globally and regionally. Here global companies and economies work in local competition within global structures (e.g. Vodafone)

- Globalisation favours cities which are well positioned geographically to targeted markets and which have well developed infrastructure, particularly transportation and communications, and are physically attractive with a unique cultural identity. Maximising the use of assets and capital (social, political, democratic, cultural, financial, technical and environmental capital) is required along with a strong long term commitment to addressing weaknesses
- Sustainable principles, relating to strong communities, environmental resilience, cultural and social identity and opportunity, become increasingly important as globalisation forces more rapid change on cities
- To become a global city/region, Auckland will need to embrace and grow its knowledge economy, identify and express its uniqueness (cultural, environmental and social) and offer world class transportation and communications facilities
- Global competition, local leadership are seen by many as the short term drivers of globalisation
- Strong, sustained and informed leadership (including civic) are the hallmarks of many successful cities. Leaders will also be increasingly required to offer a compelling vision and strategy of their city/region's potential future within the wider global context
- Creating new organisational frameworks that capture the collective wisdom, creativity and technical skill of the city and assist in the development of an intelligent city that anticipates change and responds appropriately. Here the challenge will be to develop highly participatory processes focused on integrated problem solving
- The issue is whether "the city" is a super-institution (i.e. an umbrella) through which the many strengths and weaknesses of geographically proximate communities of households, businesses, and other organisations can achieve some sort of collective advantage or positioning that enables them to achieve the standards they aspire to – material, community, economic, environmental, built, etc
- Maintain strong external relationships with existing and likely future strategic partners. Tap into the migrant community's contacts and influence in these markets to strengthen connections and further trade opportunities
- Engage fully in international processes to advance New Zealand's interests
- Invest more heavily in infrastructure, technology and education? But who is going to do all this if the city is unable to cope?

Key Questions

1. What changes will the Auckland region make to its governance framework to support and empower the sharing of intelligence, collective wisdom and security that are necessary to enhance its ability to compete globally¹?
2. Should the Auckland region diversify its economic base (products/services/markets) to compete in the global knowledge economy? And if so, what specific changes will

¹ This aspect relates to the concept of a strategic city compass where the collective eyes and ears of the community are harnessed to create the intelligent city that is agile and can respond effectively to a wide array of potential changes. Here, frameworks focus on facilitation by local government rather than full control. They are visionary and require participatory communication that is focused on integration.

be required to attract and/or encourage the proliferation of innovative knowledge workers, entrepreneurs and companies?

3. In contrast to item two above, should the Auckland region develop specialised activity clusters which build from existing or fledgling themes like research and development in East Tamaki and education in the CBD? What processes, structures and initiatives need to be put in place to encourage this outcome and the ongoing need to attract and/or encourage the proliferation of innovative knowledge workers, entrepreneurs and companies?
4. Should Auckland (and New Zealand) reject globalisation and make its own independent way in the world by promoting its unique cultural identity, its clean green image and its innovative and quality export products and services?
5. Should Auckland (and New Zealand) take a hybrid approach where it competes in the global market place but does so while retaining its unique identity and trade advantages?
6. At what point might the broad processes of globalisation be thought to clash with the obligations of the Treaty of Waitangi?
7. What will be some of the key themes or characteristics in Auckland city/regions unique sense of identity?
8. In the era of globalisation, what must the Auckland city/region guard against the most?
9. What agencies (government) are most likely to influence policy in the Auckland region and what will be their relationships within central government and with local government?
10. What will be the form of business, cultural, ethnic and inter-cultural alliances in the future?
11. How will New Zealand's trading partners change over time and how will these changes impact on the Auckland region?
12. How will globalisation influence and change the role of nation states, democracies, regionalism, established trading and political alliances, global power and armed conflicts.

Scope and Purpose of this Paper

This paper studies the role, historical effects and potential opportunities presented by globalisation, both within the New Zealand and Auckland contexts. The findings of this paper will be applied to subsequent work strands of the START project, particularly the 'Theme Papers', and used to better inform its longer-term strategic needs. The paper also explores the implications of globalisation for the Auckland region. First, globalisation is defined and potential scenarios explored in order to gain a better understanding of potential future events. Then conclusions and implications for sustainability planning in Auckland are identified. Finally, globalisation mega trends from the past are summarised.

1.0 Introduction

This globalisation discussion is based on the premise that growth is taking place in the face of resource constraints. Notwithstanding this premise, the long-term history of development is about doing more with less, and pushing back the constraints. The issue is that we may be developing a better appreciation of the hidden costs of productivity growth. The upside is if we know those costs, we can address them.

Global economies require the consumption of energy and other materials that have finite limits, within a given technology set. During the next 50-100 years we do not know what the relevant technology set will be – but current directions and known but non-commercial technologies suggest we can be very optimistic about it. Now that the real costs of a fossil fuel driven economy are becoming apparent we can expect rapid progress to be made to reduce today's unsustainable path. (The unknowns are how the developing world reacts). The growth of consumption, population, or production under such conditions typically follow an S-shaped curve.

At the beginning of the curve, growth is slow as knowledge about how to exploit a new situation spreads. Once this has taken place, growth accelerates exponentially until the limits of the resources are reached, after which it slows and then stalls. In fact, the exponential curves for population and resource consumption can be broken down into a series of overlapping S-curves, or, envelope curves. This conclusion leads to an important question: how do we make the transition from one S-curve to another (as opposed to stalling at the end of one)?

It *appears* that technology allows humans to make this transition, enabling niche expansion and increased output with less input. As such, technology has important implications for achieving a sustainable world population. On one hand, nanotechnologies, biotechnologies, and information technologies promise to significantly reduce capital consumption. On the other hand, their ability to expand available resources will likely result in increased human fertility. As such, technology is a necessary, yet insufficient condition for achieving a sustainable population. What is also required is a change in worldview that internalises the carrying capacity of the planet.

Indeed, the literature identifies clear signs that a change in worldview is currently underway. It proposes that humankind is moving from a reductionist and mechanical worldview, to one that is holistic and organic. However, a complete change in worldview takes time. The last shift in the West took approximately 100 years, or three generations. It began with the publication of Galileo's *Discourse on the Two Methods* in 1638, and was generally accepted by the educated and governing elite in approximately 1730.

The present shift away from the reductionist, mechanical way of seeing the world is said to have originated with a series of papers on Quantum Mechanics in the 1920s, and will likely take until 2030 in the West, assuming this same 100 year transition period. Furthermore, there will be a lag before the remainder of the world catches up, based on historic transitions from pre-modern to modern paradigms of societies and economies. The spread of this worldview around the world is a critical aspect of the globalisation phenomenon (see the Worldviews Forces Paper).

Globalisation is not only about the merging of national economies into one large global economy: it is also about the spread of common values and behaviours that will cause people to operate as part of a global society that respects the constraints of the biosphere. Recent historic events such as the public protests against the Multinational Agreement on Investment (MAI) and the World Trade Organization (WTO) as well as the widespread signing of the Kyoto Protocol, suggest that such a value change is indeed possible.

2.0 What is Globalisation?

Dealing with an Unpredictable Future: Scenario Identification

In dealing with the future and the unpredictability of sea change events there are a number of ways of thinking about how the future will unfold. It is difficult, though, to move away from extrapolating the past – whether through trend analysis, scenario building, or simple speculation. Knowledge of past events and current conditions, and connections among them, naturally constrain thinking. However, experience over the late 20th Century demonstrated the shortcomings of extrapolation. Each decade was seemingly shaped by sea-change events that fell outside the projections of most analysts and prevailing expectations. They included:

- Hiroshima, the first nuclear bomb (the forties)
- The oil and energy crises of the 70s
- The unravelling of Keynesian economic policy in the 80s
- The crumbling of the Iron Curtain in the 80s and 90s
- The reach of the PC and internet in the 90s and beyond
- The transformation of the Chinese political economy in the 90s and beyond
- The twin towers incident in the 2000's and subsequent response to terrorism

It is not that these formative events were unpredictable or unfathomable – but that the timing and scope of the changes went beyond prevailing expectations (Bill Gates' understanding of the potential of the PC and Internet an obvious exception).

Frameworks for thinking about long-term change

The conundrum is how to project discontinuity and predict the unpredictable. While this is an impossible challenge on the face of it, we propose that intersection of the two paradigms underlying the literature on economic and social development offers a framework for commencing the task; and suggest some scenarios that can be used to identify the most likely drivers from across a range of possible outcomes.

The examples of the unexpected critical events bulleted above can be considered as turning points, or points of discontinuity. The political economy literature deals with such sea change in terms of long-term shifts (the Kondratieff Cycle), technology cycles (e.g. Schumpeter's

model of creative destruction displacing prevailing technologies), or transformations of capitalism as it responds to emergent “crises of accumulation” (the depression of the 1930s, the stagflation of the 1980s, etc). Whatever the explanation, the issue is how nations, regions and communities might progress along the path to “modern development”.

Futurist thinkers may work from the classical “structural functionalist” paradigm of technology driven, incremental change, a paradigm that carries with it a view of the continuity and inevitability of progress. Or they may work within a “historical materialist” view through which the future will be marked by discontinuity and subject to crisis-driven transformations but, at as a result of each, progressively moving to a more advanced, sustainable level of development.

Alternative Globalisation Scenarios

Scenario 1 : The Competitive Cities / Global Economy Prediction

Description

This scenario, largely promoted by large international corporations, suggests that cities are and will continue to be the driving force behind the world economy. The scenario is supported by the following assumptions:

- Breaking down barriers/borders between countries
- Bringing countries and people closer together
- Shared knowledge
- Creating a smaller world
- International economic integration
- An emphasis on the knowledge economy and cities driving economic growth world wide.

Geopolitical and Economic

According to economist Herman Daly, globalisation refers to “the global economic integration of many formerly national economies into one global economy, mainly by free trade and free capital mobility, but also by easy or uncontrolled migration. It is the effective erasure of national boundaries for economic purposes.” In addition to this economic point of view, globalisation is about the acculturation of other societies and cultures to one dominant society or culture.

On the highest level, it is about acculturation to modernity - the freedom of the individual to question authority and make decisions without deference to anyone (authority itself residing in a democratically elected legislature and a constitution interpreted by an independent judiciary, and truth defined by scientific experiment). At another level, globalisation is about the Americanisation of other societies - the adoption of a particular brand of modernism that has developed in the United States (US).

More recent trends in globalisation point to a potentially different outcome to that promise that nation states were heading towards irrelevance; that economics rather than politics or arms would determine human events have in fact increased nationalism, fundamentalism and protectionism - particularly in Europe.

Community

The scenario points to a likely reshaping and re-distribution of jobs such as outsourcing from richer countries to poorer of less cost efficient jobs and their corresponding replacement with high technology / high value jobs in the knowledge economy. This assumption, if fully realised has significant implications on the social fabric and indeed stability of communities. It also has the potential to impact employment opportunities in working class communities and create significant issues during transitional periods between existing and future job opportunities.

Scenario 2: Sun Sets in the West – Rises in the East

Description

Structural weaknesses and a reaction against the long-term hollowing of the US economy, and a loss of allied support for sustaining existing trade and resource relationships (oil being the obvious one), and inconsistencies in foreign policy could see a return of a more isolationist US, focusing on domestic and western hemisphere issues. New global giants may begin to emerge, including China, India, Eastern Europe, and later, Indonesia, fill the gap and create a truly global community of economy and influence. Southeast Asia will prosper through its association and location relative to the new power houses. The interests of South, Southeast and North Asia will converge. The mature economies of Europe and Japan will prosper from progressively opening their borders.

Geopolitical

The decline of US political and economic hegemony will see a balancing of relations among world powers, reflected in a reformed and re-energised UN, or equivalent. A wide range of NGOs will mediate trade relations. Local areas of conflict will remain and could spread as the new prosperity is inevitably unevenly spread among the emergent nations with their traditional sectarian, religious and ethnic divisions and diversity.

Economic

Global trade and global production systems will become stronger and more complex, driven initially by regional blocs and alignments. Consumption will expand rapidly in the emergent nations, underpinning a continuing explosion in travel. E-commerce will be prevalent, although the burgeoning of trade will still call for global currency standards - with the Euro perhaps the new benchmark initially. Resource and skill shortages may provide bottlenecks. The former is a potential source of conflict; the latter will encourage harmonisation of labour market regulation and drive greater levels of mobility, not all of which will materialise as migration in the sense of changing the nation of domicile.

Community

Ageing issues will slow down the rate of expansion of economies that do not adjust to the new global economy. It will also drive productivity and the export of consumption goods from the new global producers in Asia. It will also create large conservative, service-focused regional communities in sun belts; and drive tourism as the baby boomers of the west move into the realms of super-consumption (the cruise boat belt). Local communities will be challenged to maintain and assert their identities in the face of growing diversity and mobility. The challenge will be made greater by uneven resource endowment among communities. The strains of globalisation may show up a thousand miles away from the action, where relative deprivation is highlighted by images of prosperity conveyed by television (and its derivatives) and tourists.

Living together will be a challenge to local governance.

Scenario 3: The China Century

Description

This is in some ways a variant on Scenario one. China's investment in productivity, in regional integration inside and outside its borders, its embrace of free trade, deregulation and reform of financial systems under the auspices of a single party system see it sustain its boom and displace first Japan and then the US as the world's leading producers. This is followed by the rapid growth of China the centre of consumption; dampened by rapid ageing after 2030.

Geopolitical

China's relations with its regional neighbours will begin to shape the direction of Asia. Developments in the east will also see it assert its presence in Central Asia and eastern Europe, where it will forge alliances. Outstanding issues in the region, including relations with Taipei, Tokyo and Hanoi will need to be resolved, and an emergent China could bring significant influence to bear on the re-unification of Korea.

Economic

By opening up its borders to investment, travel and trade China will continue to absorb finance and resources and account for ever increasing shares of regional and world export of consumer goods. This will fuel the import for a time of intermediate and capital goods and for services, including education and training, but these could slowly be displaced by local supply. Within 20 years, China, like the US and Japan before it, will become a powerful overseas investor, in resource development throughout Asia and Eastern Europe, and importing, distribution and consumption services, including tourism, elsewhere. China will carry with it the rise of Asia and its emergence will be marked by increasing north-south economic integration in Asia as other nations become bound into far-reaching multi-lateral agreements.

Community

The community issues are similar to those of Scenario one. China, in particular, will have to be aggressive in both its investment and its governance policies to avoid or subvert resistance among minority populations to the north and west, while maintaining progress and stability in its prosperous east and south (which are themselves highly diverse). The role of the Chinese diaspora may become important in evolving relations elsewhere in the region.

Scenario 4: A Globe Divided

Description

The Christian West and the Muslim East move apart, with no end to the war on terrorism. A peaceful coexistence or detente could emerge as one variant, especially as oil dependence diminishes. (This is an outcome that may be consistent with the preceding scenarios). There is acknowledgement that there is more than one end game – modernity for the west; something else for the east. The western model still depends on quasi-colonial access to global resources so tensions flare up from time to time.

Economic growth and productivity is prejudiced by the diversion of resources into defensive and aggressive military exercises, global mobility is constrained.

Geopolitical

Regionalism dominates trade, but multi-lateral alliances across regional divisions are required for defensive and security reasons. These may also influence the flow of funds and aid. The challenge is to achieve peaceful coexistence not just of ideologies but also of quite different political and value systems. The UN will continue to struggle to resolve tensions.

Economic

Trade blocs will continue along regional and ideological lines. Contrasts will strengthen among developed, developing, and underdeveloped nations. Asia will drive growth while resources will continue to increase in cost and be a focus of conflict.

Community

Compared with other scenarios, travel will be constrained and along familiar lines across the Atlantic and Pacific, or within regional blocs (Asia). Within nations, divisions will continue among ethnic and minority groups. Economic advantage will be defined along migrant/non migrant and minority lines. Diversity will be a source of conflict.

Scenario 5: The Disappearing Sovereign State

Description

This scenario assumes that globalisation gives increasing weight to NGOs, including the World Bank, IMF, the United Nations and its various agencies, and international collaboration for “nation building”, world health and aid. International organisations will progressively harmonise the rules of trade and finance across boundaries working from regional blocs upward. Global labour markets will evolve in areas of high skill and expertise, at one end of the scale, and among semi-skilled productive workers at the other. Consequently, the licensing and regulation of professions and standards will be aligned across nations.

Common standards (production, environment, health, safety) will be developed by collaboration among professional associations for collective governmental endorsement and enforcement by individual governments. Security will increasingly work to common objectives, share information, and develop joint operative arrangements. All of this will facilitate and accelerate exchange at the broadest level. Boundaries will cease to dominate the rules of business, investment, and even the rights of citizenship.

Geopolitical

This is an outcome of cooperation and, occasionally, coercion, as countries define the areas in which they move towards common standards and allow governance – ruling with authority – to shift towards regional or international bodies. It is happening at present, both through regional cooperation and through international institutions. At this stage, the drivers of cooperation are uneven, the institutional arrangements still reflect the pre-eminence of the North Atlantic nations. However, there are signs that this is changing, and the outcome may be new levels of real international cooperation.

Economic

The erosion of the sovereign state is most likely associated with Scenario one, and implies a move towards the free flow of trade and factors of production (labour, capital). It represents a future in which global interdependence drives the regulatory environment. It assumes a

reasonable balance in economic as well as geopolitical relations as a result of the rise of Asia and eastern Europe. There must be provision, too, for agencies to boost the development of the lagging southern lands - South America and Africa in particular.

Community

People will identify with international communities – professional associations, multinational enterprises, as well as communities of interest of a non-vocational nature. This will not diminish the importance of local identity and citizenship, especially for large groups of people and communities operating on the margins or outside the global economy. There will be a challenge of social inclusion, both for a growing group of “citizens of the world” and for those obliged, or committed, to reside in distinctive local environments.

Scenario 6 : Age of Gratification

Description

The continuation of the current path of consumerism most evident in the developed west already rapidly burgeoning in Asia and beginning to appear in parts of Eastern Europe suggests that post-modernity becomes the new modernity. Over-consumption, intensive market and product differentiation, consumption as creativity, and pluralism become the norm as the market prevails.

Geopolitical

The European model prevails, as ASEAN + 10 envelops all of Asia; NAFTA provides a focus for the integration of the Western Hemisphere, and Australasia seeks partners throughout Asia, as well as South Africa and Chile. The strongly Muslim countries remain as a bloc, with Malaysia, Indonesia, Pakistan and some of the Arab states acting as intermediaries in the flows of goods and finance. The main hot points emerge from pressure on resources and on the environment.

Economic

Industry and technology meet the challenge of ever expanding consumption, communications and travel. There is a concerted drive for productivity and to shift to new sources of fuel. Global production systems prevail, but with the capacity to meet an ever-increasing range of product specifications and consumer preferences.

Community

The loss of local identity in the face of increasing global branding will contribute to a growing sense of alienation. The drive to acquire the latest and greatest consumer goods will create tensions between the rich and poorer sections of society and could lead to social unrest. Communities of interest will be defined according to fashion and tastes rather than geography or demographics and will be sustained by increasing travel and virtual communities. Perhaps the greatest conflict will be with the environment. The consumer ideology is not one willingly constrained by concerns about future generations unless these become the values of society.

Scenario 7: Blowing Hot and Cold

Description

Under this scenario, increasing evidence of global warming by way of sea level change, climatic shifts, and extreme weather events drives radical changes in patterns of production

and consumption. A shift from fossil fuel based energy supplies sees major changes in economic performance, growth rates and the distribution of wealth. A move towards community self sufficiency reshapes consumption behaviour, although substantial investment in technology advances enable progress to be made on a wide range of fronts, including nuclear and hydrogen based power and fuels systems.

Geopolitical

International politics are destabilised in the face of conflicts over resource consumption and pollution. International law moves to create enforceable protocols governing production energy and production technologies.

Economic

The global economy is destabilised by energy, resource and environmental crises, the later including an increasing incidence of natural disasters that undermine confidence and productivity. Some areas remain relatively immune, and advantages are sought in increased energy efficiencies, resource conservation and environmental management practice.

Community

Conflicts among nations continue, and tensions may deepen between global regions. Locally and globally, divisions between rich and poor increase. Islands of sustainability emerge and are under pressure from environmental refugees, as well as the refugees of conflict.

Overview in Summary

None of these scenarios see an early end to current issues of destabilisation – terrorism in response to resource and ideological differences and an emerging schism between western allies and Muslim Arab states. Instability and volatility are likely to be the starting point regardless of outcome.

Continuing globalisation appears inevitable, but could go down different paths depending on the outcome across the following dichotomies underlying our scenarios:

- global economic interdependence
- growing global divisions
- growing global consumerism
- emergent environmentalism
- global production systems
- resource constrained production

These potential outcomes emphasise countries and borders and alludes to economic integration. While an understanding of economic integration is probably the key consideration here, other potential manifestations of globalisation may include the breaking down of borders.

Globalisation reflects (and may be driven by) accelerating and expanding exchange – of goods, services, and especially financial flows and information, as well as people – migration and tourism. To achieve this hyper-exchange (a character of advanced capitalism) requires the break-down of institutional and technical barriers – hence the nation state implications. But the new institutions of exchange are defined almost independently of nation states – commercial organisations, NGOs (especially those setting standards), government and inter-government agencies, and the like. Technology is also critical, including low cost, high

speed movement of people and goods; instantaneous information exchange; instantaneous currency movements (mediated and facilitated by sophisticated financial instruments).

What these trends suggest is that institutions and enabling technology will become increasingly important as will any threat to their existence (if we want to continue to participate in the globalisation game). A likely consequence of this could be an accelerated acculturation process. One of the challenges is that while the institutions adapt and respond, individuals and communities may struggle to catch-up.

3.0 Key Messages for Auckland

- Globalisation may be seen as increasingly focused on cities, where the majority of the world's population now lives. However, it's not just about cities, although they are likely to exert a major influence on the future of countries – or at least how engaged countries are in the globalisation game (through their institutions)
- Cities are now regarded by many as the driving force behind the world's economy. For others this is a simplistic statement. However, it is clear that cities are sites of activity, innovation and accumulation. It is cities and not countries which are competing globally and regionally. Here global companies and economies work in local competition within global structures (e.g. Vodafone)
- Globalisation favours cities which are well positioned geographically to targeted markets and which have well developed infrastructure, particularly transportation and communications, and are physically attractive with a unique cultural identity. Maximising the use of assets and capital (social, political, democratic, cultural, financial, technical and environmental capital) is required along with a strong long term commitment to addressing weaknesses
- Sustainable principles, relating to strong communities, environmental resilience, cultural and social identity and opportunity, become increasingly important as globalisation forces more rapid change on cities
- To become a global city, Auckland will need to embrace and grow its knowledge economy, identify and express its uniqueness (cultural, environmental and social) and offer world class transportation and communications facilities
- Global competition, local leadership are seen by many as the short term drivers of globalisation
- Strong, sustained and informed leadership (including civic) are the hallmarks of many successful cities. Leaders will also be increasingly required to offer a compelling vision and strategy of their city's potential future within the wider global context
- Creating new organisational frameworks that capture the collective wisdom, creativity and technical skill of the city and assist in the development of an intelligent city that anticipates change and responds appropriately. Here the challenge will be to develop highly participatory processes focused on integrated problem solving
- The issue is whether “the city” is a super-institution (i.e. an umbrella) through which the many strengths and weaknesses of geographically proximate communities of households, businesses, and other organisations can achieve some sort of collective advantage or positioning that enables them to achieve the standards they aspire to – material, community, economic, environmental, built, etc
- Maintain strong external relationships with existing and likely future strategic partners. Tap into the migrant community's contacts and influence in these markets to strengthen connections and further trade opportunities
- Engage fully in international processes to advance New Zealand's interests

- Invest more heavily in infrastructure, technology and education? But who is going to do all this if the city is unable to cope?

4.0 Historical Patterns

History of Globalisation

The Enlightenment and industrial revolution basically drove the globalisation process that we know today, while technology accelerated the speed at which it is taking place.

It is worth emphasising here that continuity exists at one level – not something we can readily ignore or resist (although there will always be pockets that reflect adherence to a particular time- and place-specific set of beliefs – e.g., Amish communities and Nimbin)

But the issue then becomes how in this continuum, change (progress) is effected – through revolution (the historical materialism of Marx) or through instrumentalism (the structural functionalism of classical economics). We have discontinuities and breakthroughs – unpredictability and periods of instability, but with an underlying coherence. Without this, we would not plan. (Here, we note that the Muslim world, or elements of it, are consciously rejecting modernity).

One way to interpret globalisation is to build on the learning of historians such as Fernand Braudel and Paul Kennedy, who understand the past as an evolving series of world economies, centred around specific technological advancements and territorial control. In this context, globalisation is as old as technological innovation, trade, and military conquest, which are the factors that drive it. Under this perspective, all ancient civilizations globalised the economies and societies of their world, from Ur of Chaldes to Rome.

Since the Middle Ages, the history of the West is a history of successive globalisations by the Venetians, the Spanish Netherlands, the Genoese, the Dutch, the English and finally, the Americans. This long history makes it possible to identify repetitive patterns and trends.

Each era of globalisation creates a new 'world economy' with a 'world city' at its centre, where the world economy is an organic, self-sufficient economy, and the world city is the city around which the world economy revolves. The size of world economies have grown over time, beginning with Asia Minor and the Nile Valley and progressing to today where the economy literally encompasses the entire world.

Examples of past world cities are Ancient Rome, 19th century London, and 20th century New York. Other cities are tied to these centres of power through trade, conquest, and treaty. For Rome, this included trade in olive oil and wheat, as well as conquests of the Greeks, Egyptians, Carthaginians, and the Pax Romana. For London, trade centered on manufactures and coal, and the British conquered India, America, and the Pax Britannica. New York trades in stocks, bonds and petroleum, and conquered Germany and the Soviet Union, as well as American multinational corporations' conquests of world markets, the International Monetary Fund, the General Agreement on Tariffs and Trade, and the Pax Americana.

The World City Economy

The world economy comprises a hierarchy of cities and the hinterlands on which they depend. This is often referred to as a metropole. These lower hierarchies of cities are important for the world city in order to ensure a constant flow of resources and to defend its hinterland. As such, the world city needs strategic garrison cities, ports, and administrative centres. For example, in the 18th century, London had cities such as Montreal, New York, Bombay,

Calcutta, and Cape Town to provide these functions. Today, New York has cities such as Calgary, Edmonton, Toronto, Manila, Riyadh, Kuwait City, Kuala Lumpur, and Sydney.

Historic Conditions for a World City

Historic patterns suggest that a world city can only remain a world city for as long as a certain set of conditions held true. In the past, world cities required:

- *The most advanced civilian and military technology.* The most advanced civilian technology is required to generate the income that it needs to pay for armed forces, build infrastructures, provide public services, and research and develop new technologies. The most advanced military technology is needed to conquer and hold the hinterland that the city requires for resources, and to confiscate the wealth of rivals, with which most world economies have begun their rise
- *The majority of the savings of the world economy.* The world city needs most of the world economy savings to be in a position to fund the technological innovation and conquering armies upon which its dominance rests. World savings are also required to exert the financial power that allows the city to set the rules for others
- *A well functioning finance and payment system.* Efficient finance and payment systems are critical to maintain infrastructure and vibrant trade
- *Efficient transportation technology.* Transportation technology is required to convey resources from the hinterland to the world city as well as manufactured goods from the world city to the hinterland. It is also needed to move people and armed forces.

Reasons for Decline

Inevitably, world cities cannot maintain these conditions forever. When they first establish hinterland cities, they transfer to them financial capital and technical know how. As these hinterland cities grow and develop, they begin to generate savings out of the flow of income and revenue, and become quasi-independent sources of wealth creation. The world city begins to lose its grip on the pool of savings in the system as well as on the manufacture of advanced products that generates revenues. This trend is exacerbated by the military costs of policing and expanding the hinterland. History has shown that the high military expenditures are often at the cost of systems such as infrastructure and public services. In the long-term, this undermines the economy of the world city. Less money is allocated to civilian research and development and to new industries, with the consequence that economic growth slows and stagnates. Furthermore, success may create arrogance and social inertia, making it difficult to respond to new commercial, military, or technological challenges. In modern times, inertia in the face of technological challenge has been a common cause of decline.

Nature may also intervene in the dominance of world cities. First, resources are limited, and only a given amount can be extracted from an ecosystem with a given technology set before the resource is exhausted. Secondly, historic patterns show that globalisations have usually occurred in climatic warming periods and were usually terminated by a cooling. This is illustrated in the history of ancient civilizations. For example, the Maya cut the forests until water tables sank and corn production declined. A cooling climate added to this human-induced drought and led to collapse. Similarly, the first European expansion (from 900 to 1300AD) came to a halt due to resource exhaustion and climate change. The Europeans ran out of rivers on which to built water mills and cut down all the accessible trees. At the same time, the Little Ice Age in the early 1300s triggered the Black Death and devastated the food supply. History shows the impact of climate change. Given that the modern era of industrialization coincided with a warming period, a cooling could reverse or end this era.

Hierarchy of World City Participants

Within a world economy, there is circular hierarchy of participants. The top of the hierarchy consists of a small 'core' group that hold the most advanced technical and economic capacity.

During the mid 19th century, this core was restricted to few cities in England. In the mid 20th century, it was confined to the North Western United States.

Today, it is made up of Central California. Below the core is a 'middle zone' of cities that are the early adopters and imitators. In the mid 19th century, this zone would have consisted of cities such as Essen, Frankfurt, Liege, Paris, New York, and Baltimore. In the mid 20th century, the middle zone included Windsor, Toyota City, Coventry, Goteborg, Munich, Turin, Sao Paulo, and Mexico City. Today, the list includes Houston, Boston, Seattle, Portland, Vancouver, Edinburgh, Oxford, Singapore, Bangkok, Shanghai, Taipei, and Pusan. Beyond the middle zone is the periphery. This zone contains the late adopters and the non-adopters, who supply food and raw materials. In the mid 19th century, the periphery consisted of the interior of North America, the Argentine pampas, most of Russia, China, South and East Asia and Africa. In the mid 20th century, the periphery included Western Canada, Alaska, the Middle East, Venezuela, Chile, Jamaica, Indonesia, Southern Russia, Siberia, and the Canadian North. Today, it is made up of Northern Alberta and North East British Columbia, South East Asia, Central and West Africa, Ecuador, the interior of Brazil, Southern Mexico, the Maquiladora zone of Mexico, amongst others.

With each world economy, the frontier of resource development tends to shift. For example, for Venice, the resource frontier was the lands bordering the Adriatic; for Amsterdam, it was the swamps of the Netherlands and the spice islands of the East Indies; for Antwerp, it was the metal mines of Chile, Peru and Mexico; for London, it was the furs and grain of North America, the tea and opium of India, the slaves of West Africa and the sugar islands of the Caribbean; and for New York, it was the minerals of Canada, South and Central America and the Middle East.

Patterns in New Zealand and Auckland

While the economic prosperity of the last 15 years has been largely driven by New Zealand's primary sector, in response to expanded and value enhanced penetration of lucrative foreign markets, Auckland's economic performance has been far from impressive. This is in part due to the fact that the city's economy is so internally focussed. This means for the most part it feeds off its own activities, which focus on the real estate market, education, and a variety of financial services aimed at serving Auckland and New Zealand's primary sector. Auckland hasn't really been a centre of excellence or innovation particularly with regard to creating an environment that supports and develops products and services that reap earnings from exports. To date Auckland's economy has not fully engaged with the opportunities arising out of globalisation mega trends, nor has it positioned itself particularly well to compete effectively in the new knowledge economy. Despite these shortcomings, there are growing opportunities in the areas of technological services/research that have the potential to deliver significant export earnings for the country if developed and managed appropriately.

5.0 Key Issues

Mega-Trends in the 21st Century

Effects of New Technologies

A number of questions arise regarding the future direction of globalisation. Will it advance or retreat? Which city will be the next world city? Which cities will be in the middle zone and on the periphery? These questions speak principally to new technologies. The city leading in technology will likely be the primary influencer of the world economy.

Today's leader of the world economy is New York/Washington. The city-region rose to dominance on the technology set surrounding the internal combustion engine and petroleum and is extending it through mastery of Information and Communication Technology (ICT). During this time, the core cities have changed from Detroit and Pittsburgh (autos and steel) to Los Angeles and San Francisco (aerospace, movies and ICT). Until 2030, it is likely that ICT will continue to be the dominant technology set, aided substantially in its further development by nano technology. Alternative energies and new materials will also undergo considerable development.

Technological Evolution In The Future

In the 2030s, there will be a shift in the dominant technology set to biotechnology and nanotechnology, integrated together and with ICT. Based on the historical patterns identified, the next world city must be at the leading edge of all three - a tall order, given the large and complex grouping of these technologies. In contrast with historic patterns, it appears that centres of excellence are emerging in widely separated locations. For biotechnology, hubs of leading activity range from Shanghai to Edinburgh to San Francisco. Alternative energy leaders are also dispersed, with: California and Australia leading in photovoltaic; Vancouver, Danforth (CT) and Rochester (NY) in fuel cells; and Denmark and Germany in wind turbines.

The challenge globalisation presents is that the technology that brings people closer together evolves faster than the time it takes for people to change their attitudes, beliefs and behaviours.

Future Production Technology

The technical shift of the 2030s will be transformational, marking an epochal shift from the pyrotechnic era to the biochemical era; from macro scale and energy-intensive production to molecular scale refined chemical orderings employing low levels of low quality energy. Indeed, humanity has not seen such fundamental technological change since the invention of the steam engine and iron smelting with coke in the 18th century. It is expected to completely reorder the world.

Efficiency gains will be orders of magnitude greater than in previous globalisations. Improvements in energy efficiency of machines doubled between the last two world economies (from steam engines to internal combustion engines) and will double again with fuel cells. However, when artefacts self-assemble under the guidance of DNA or a weak electric current, as opposed to smelting, punching, cutting and grinding metals with heavy machines, the quantity of embodied materials and energy required for their manufacture is expected to fall by 20 to 50 times. In other words, the resource efficiency of the next world economy will be significantly greater than today.

Furthermore, future artefacts can be made with materials that are abundant in the earth's crust, such as silica, bacteria, sugars, cellulose, and aluminium. They will be smaller than the artefacts of today. The processes and machines will be so much smaller and less expensive that manufacturing and power production could become a 'do-it-yourself' activity. International

trade in raw materials and manufactures will be reduced, which will further reduce energy consumption.

Such technological changes will be sufficiently paradigm breaking that leadership could pass from the US to others (e.g. India, China, Brazil), as it did from Great Britain to the US with the paradigm break from steam engines and railways, to the internal combustion engine, electricity and chemicals in the late 19th century.

Military Technology

Biotechnology and nanotechnology will cause a change in the weapons paradigm and in strategic military thinking, creating a new arms race. Indeed, it has already begun with considerable resources being invested into biological weaponry and their antidotes, and the nanoisation of conventional weapons. Strategic materials will switch from metals like tungsten, molybdenum, nickel, titanium, and hydrocarbon energy sources to viruses and bacteria, and the sugars on which they feed. Access to immense quantities of resources will cease to be a strategic issue, as modest amounts of locally available materials will suffice. Furthermore, the equipment required to develop such weapons will be small and relatively inexpensive. Small states and other groups could develop and manufacture them quickly, and with the Internet, proliferation of technology will be swift. These trends will make it more difficult for any one city to dominate the world and hinterland economies than was the case in the past.

Future Global Considerations

Structure of the Present and Future World Economy

Today, the economic *core* is not as compact as it was in the past. Leading edge innovation is taking place not only in the Silicon Valley, but also in Seattle, Vancouver, Singapore, Edinburgh, Shanghai, Tsukuba, Seoul, and Taipei. The *middle zone* is also larger today than it has been in the past. The ICT middle zone includes Portland, Vancouver, Seattle, Fujitsu, Manchester, and Houston, among others. This change is partly because high-quality secondary education is becoming more accessible to all, and is no longer simply the prerogatives of Europe and North America.

The core cities of tomorrow will be found among those cities that excel at the new technologies: alternative energies, and the integration of ICT, biotechnology, and nanotechnology. Speculating which cities they will be is difficult at this time: while leading cities do currently exist, they may be overtaken in the future. However, it appears that early leaders include:

- *Fuel cells*: Vancouver, Rochester, San Francisco, and Mississauga;
- *Maglev*: Frankfurt, Tokyo, Shanghai, and San Francisco;
- *Biotechnology*: San Francisco, Edinburgh, Cambridge, Montreal; and
- *Nanotechnology*: Houston, and Edmonton.

It is not possible to highlight the middle zone cities of tomorrow, with the exception of ICT (see above). As the core cities for biotechnology and nanotechnology cannot be determined, their imitators cannot yet be identified and should be monitored into the future. The periphery is made up of suppliers of food and raw materials. Interestingly, the most significant suppliers of food to the world economy of New York have been the farmers of the Great Plains of North America, the Imperial Valley of California. Spain, Israel, and North Africa have become the market gardens to Europe and even North America to a degree. The new frontier of this period was the Imperial Valley and the Virgin Lands of Kazakhstan. In the future, the new frontier for both agriculture and minerals will be the interior of Asia.

Differences between Current and Past Globalisations

Economic and worldview globalisations have been happening for centuries. However, a number of striking differences distinguish globalisation trends in the 21st century. Along with the new economic and energy systems that were discussed in the previous section, globalisation in this century is marked by a difference in scope, as the next global economy will truly engage the entire world (with the possible exception of Antarctica). Pressures to acculturate are also stronger and more insistent than they ever were in the past. Finally, civil society is playing a more prominent role in the change process.

Increasing Complexity and City Linkages

In contrast with the historic patterns identified in this paper, it is unclear that any particular city is the sole centre of world events today, particularly in terms of finance. In the 19th century, the Bank of England controlled the pound and most of the world's gold stock, which were used to finance global trade and investment. Today, activities are dispersed and linked. For example, most of the world's savings are in Tokyo, the Grand Cayman Islands is fifth in the world in terms of booking bank loans, major companies like Cargill and George Soros's Quantum Fund channel significant financial transactions through the Netherlands Antilles (supplying capital to the US), world trade is substantially financed by 'US dollars that are no longer controlled by the Federal Reserve Board), and so on.

What emerges as the centre of a new world economy may not be a single city as in the past. Rather, it may be a complex series of linked cities, or a federation of cities. Professor Fu-Chen Lo of the United Nations University has extensively studied urbanisation and globalisation, and has noted this 'world city formation' pattern of increasing intensity of trade and capital flows. It is no longer sufficient to simply consider individual cities and how they function in the global economy. Rather the growth of cross border networks, ICT integration, and reassertion of cities as strategic points in these processes are defining the future of world cities in the world economy. It may therefore be to the advantage of nations with core, or early adopter, cities to form a network of alliances. The era of the new technologies, innovative excellence, and reflexive economic development will stem from synergy and convergence, particularly among three main technology groups: biotechnology, nanotechnology, and ICT.

Increased Acculturation Pressures

Pressures to acculturate are much stronger and more insistent in today's globalisation movement than ever before. When London ruled the world economy, the British introduced the English legal system to its colonies, spreading their methods of management and administration, and training locals in English military techniques. Apart from this veneer, local culture was left primarily undisturbed. Communication technology of today, however, brings modern Western culture (particularly the American variant) into billions of homes all over the world. Western values strike at the roots of almost all non-Western cultures: values of individual freedom (from paternal authority, tribal leadership, spiritual leadership, and landowner/patrician), of secular authority superseding religious authority, of truth found in science as opposed to in religious texts, and of the primacy of wealth accumulation and consumption. The power of the media to effect change on a massive scale, particularly on the young in non-Western societies, is widely recognised.

Civil Society Movement

At the same time, a substantial number of citizens in the West oppose the institutions that are being set up to facilitate the new world economy, such as the MAI and the WTO. This movement objects to the loss of democratic control of the institutions that rule their lives. Whereas they had the potential to influence national institutions through elected legislature, there are no such elected legislatures controlling the MAI and the WTO. These individuals also fear the powers that these new institutions confer on transnational corporations. They are also concerned about the erosion of national health, safety, workplace, social security, and

environmental standards as competition in world economy markets drives a harmonisation on the minimum, not on the best. This movement is innovating a new social institution called civil society to act as a counterweight to the new transnational forces. Their efforts are facilitated by ICT, which makes it possible for small and widely dispersed groups to organize more effectively than in the past.

6.0 Other Commentaries on Globalisation

An Essential Toolkit for Globalisation? (Radovanovic 2004)

- Political stamina and government's engagement with community
- Organised intelligence and security
- Diversity
- Spirit of cohesiveness
- Rich cultural life
- Favourable geographical position and infrastructure (transportation and communications)
- Scientific environment and knowledge tradition

Three Watershed Decisions to be Made (Roger Peron)

1. Should New Zealand (Auckland) be a world trend setter in the globalisation arena?
2. Should New Zealand (Auckland) become more self sufficient and sacrifice its standard of living as a result?
3. Should New Zealand retain its national identity but still join in and participate in the globalisation trend?

7.0 Development of this Paper

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