

LATAM CAPE REPORT

Creative Sector

2020



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Executive Summary

Over the past three decades the creative economy has become increasingly important to OECD countries and emerging economies alike. With the rise of new technologies of production and distribution and of globally networked citizens, the breadth of what falls under the “creative economy” category has broadened significantly. In turn, a broadened understanding of the creative economy necessarily leads to a broadened understanding of the possibilities for international research and business collaboration. The economic value of the creative economy has been a subject of much debate in recent years: debate that came into sharp focus in 2020 as the global pandemic shut down economies and has led to an ongoing hit to the creative arts sector. Commentators and global citizens alike have been quick to note that while sections of the creative sector have been devastated by ongoing lock-downs, demand for digital creative entertainment has rocketed. A fact that emphasises the degree to which the economic basis and returns of the creative economy can be relied upon in some instances and difficult to predict in others. An equally noteworthy consequence of a pandemic that has brought unexpected disruption in some cases but accelerated change already underway in others has been its revelation of the resilience of networked digital creative production. New Zealand can build the ground work for positive returns in the creative economy with Latin American countries if we support policies and projects to encourage collaborative relationships now. Collaboration and policies to encourage it should be developed with a full understanding of the significant political and economic shifts taking place at the geopolitical level. This report focuses on three Latin American countries: Mexico, Colombia and Chile and considers them in light of collaborative potential with New Zealand. One of the report authors spent 6 weeks on an educational and creative business fact finding mission to Latin America while the other has ongoing business links across the sector and the world. After an extraordinary year that has seen the widespread of a global pandemic, this report considers creative digital economies and their capacities to build partnership regardless of adversity.

Summary

- Over the past three decades the creative economy has become increasingly important to OECD countries and emerging economies alike.
- To understand and best take advantage of the potential of the creative economy we must first understand its changing nature.
- With the rise of new technologies and globally networked citizens, the breadth of what we understand to be the “creative economy” has broadened significantly.
- A broadened understanding of the creative economy necessarily leads to a broadened understanding of the possibilities for International collaboration.
- The value of the creative economy is inherent in both explicit and implicit economic returns.
- Economic returns of the creative economy can be predicted in some instances and unpredictable in others as a result of the “intangible assets” often associated with the creative economy.
- New Zealand can build the ground work for very positive returns in the creative economy with Latin American countries if we support policies and projects to encourage collaborative relationships now.
- This report focuses on three Latin American countries: Mexico, Colombia and Chile and provides a brief additional snapshot of Brazil.
- The unexpected emergence of the global pandemic in 2020 has seen the creative economy sector experience divergent fortunes from complete shut down to massively increased demand.
- The policy choices governments make in our post pandemic global economy will significantly impact the ongoing national fortunes of respective creative sectors and businesses.

The Rise of the Creative Sector

The notion of the creative sector in advanced economies has come to the fore over the last three decades. In the academic domain, commentators from Richard Caves [1] to Rosamund Davies and Gutti Sigthorsson [2] have noted the sectors rapid expansion in the 21st Century while Richard Florida [3] has observed the rise of what he dubs a “Creative Class”. Beyond academic study, however, financial institutions have started monitoring and evaluating the creative sector [4] while government agencies around the world [5] have developed increasingly sophisticated policy platforms for the sector. At the heart of this development has been a recognition of both the direct and indirect economic value the sector can bring to diversified economies.

Unsurprisingly in a context of emerging information technologies and the capacities for automation that they have unleashed, developed economies have moved toward service sector economic models that utilise cognitive labour. One of the reasons for this has been the resilience and longevity of cognitive labour in the face of industrial automation and a global economic geography in which industrial production has been outsourced to emerging economies with lower labour costs.

In recent years emerging markets have increasingly started to recognise the value of, and expand the capacity of, their cognitive economies. For countries looking to break out of manufacturing models that lock them into cheap labour and lower income bracket GDP dynamics, cognitive and creative economies offer a path up the income ladder.

At the same time, declining IT cost curves have brought the means by which emergent economies can rapidly diversify within easier reach. Such shifts have significant benefits to non-incumbent economies, allowing them to more swiftly forge national and international research, development and industrial relationships. With its model of openly engaging the world and its tradition of encouraging a young, diasporic, globally networked generation of talent, New Zealand has stood, and continues to stand, to benefit from a changing global environment.

Before we can address these benefits, however, we require an accurate definition of the creative economy, an assessment of its value to both developing and developed economies and, finally, an articulation of the relevance of this in a rapidly changing global economic and political environment.

Summary

- Creative industries have risen in significance in developed and emerging economies alike in recent years in parallel with declining cost curves.
- The increasing automation of non-creative labour tasks means that creative industry sectors will continue to grow in prominence.
- New Zealand's recognition of the centrality of creative industries over the past two decades will stand it in good stead in this fast changing context.
- To fully contextualise the opportunities for New Zealand we need a clear understanding of what constitutes the creative sector.



What is the Creative Sector?

The question “what is the creative sector?” is surprisingly common given the degree to which it is an integral feature of our society. Part of the reason for confusion regarding the creative sector’s parameters relates to longstanding perceptions of creative endeavour as something both unquantifiable and frequently outside the purview of industrial production. However, in the twenty first century this perception has been changing rapidly. In recent years major financial [6] and global governmental institutions [7] have increasingly turned their attention to the topic, not least because the creative sector constitutes an increasing share of modern globally networked economies.

The role of creativity has been recognised as a key factor in achieving the UN’s Sustainable Development Goals (SDG) of 2030 have been recognised [8]. A UNESCO report of 2018 noted that the share of global exports of cultural goods in developing countries rose from 25% in 2004 to 45% in 2014. [9] The question of what, specifically, constitutes the creative sector is frequently the first topic of discussion in reports released on the subject with the broad consensus emerging that it includes everything from Arts and Culture to Media

Content, and from Design related production to Software based innovation. Importantly, one key thread runs through all of these articulations of both national and global creative sectors: networked computation.

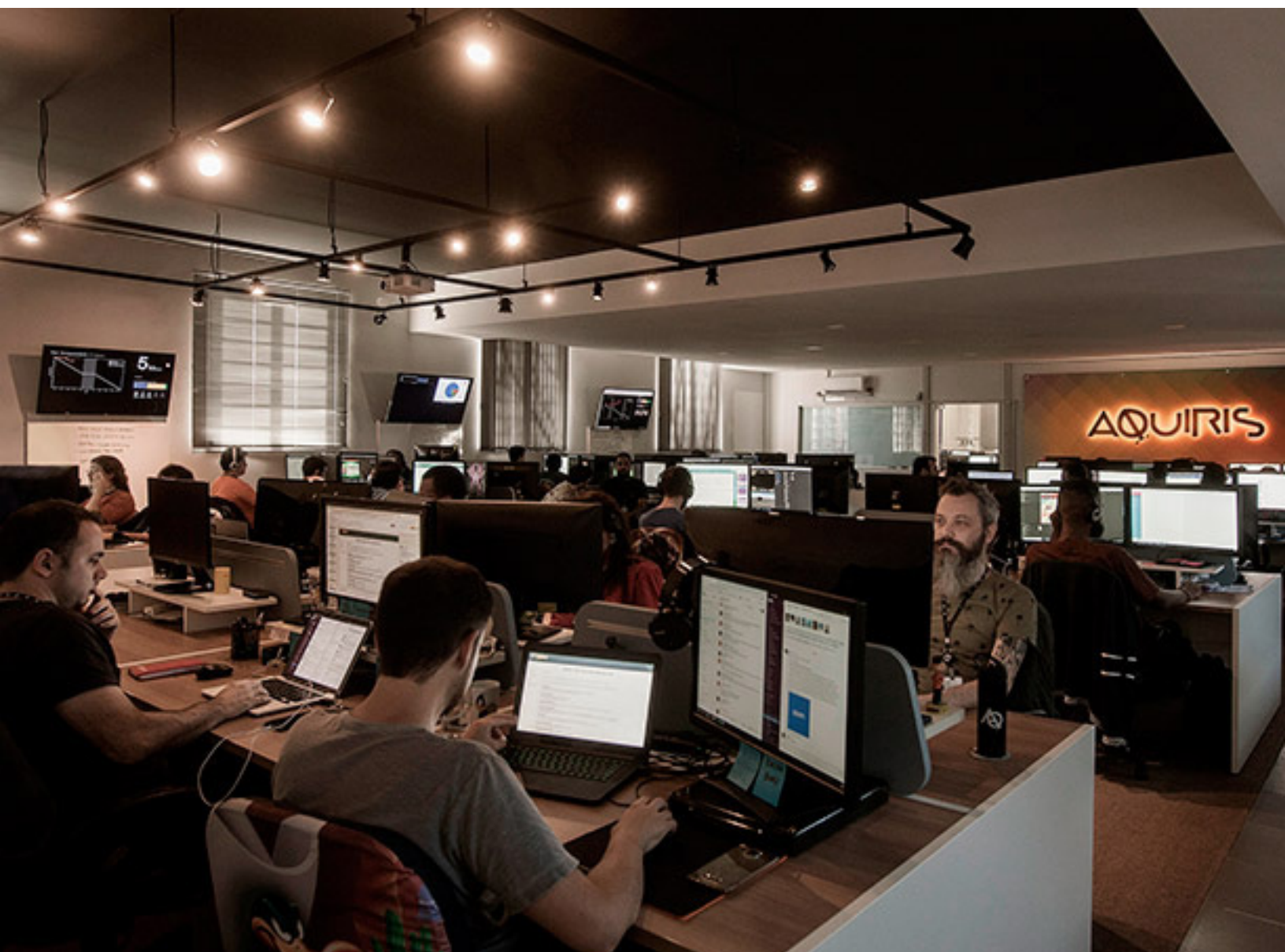
With the rise of networked infrastructure and subsequently ubiquitous mobile computing, the rapidly declining cost curves of production technologies and distribution pathways have facilitated the expansive exchange of creative expression across all spectra of human endeavour. With these developments the question of what constitutes the “creative economy” has undergone widespread expansion as the boundaries of all respective industries associated with creativity have been augmented by computational production and distribution.

It is notable that tertiary educational institutions that train talent traditionally regarded as “creative industry” professionals, increasingly offer educational pathways that combine creative subjects with technical and mathematical skills. Coding and technology literacy that previously may have fallen under the auspices of computer science programmes are now expanding across disciplines. These changes are in part

driven by employment geographies in which artists or musicians are increasingly hired into digital production domains that require a combination of creative lateral thinking skills on the one hand and technical skills on the other.

For the purposes of this report we will focus on digital production domains that include visual effects, games production, streaming content and software production. It is important to stress, however, that to take full advantage of the potential of the “creative economy” we must also expand our notion of what creativity is and how it feeds into educational and industrial

strategy. For instance, for New Zealand, the combination of traditional agriculture methods with emergent information technology techniques may seem a world away from the “creative economy” but creative thinking and approaches found in the globally networked cognitive economy are going to increasingly drive innovation to industrial structures and processes. With this in mind, the potential for New Zealand to engage with Latin American countries so far as the creative economy is concerned is significantly expanded once we have an expanded understanding of creativity and its function in the modern economy.



Summary

- Part of the reason for confusion regarding the creative sector's value relates to perceptions of creative endeavour as something unquantifiable and outside the purview of industrial production.
- In recent years the perception of the creative sector as economically undefinable has changed as major institutions have turned their attention to the topic.
- An accurate understanding of the future of the creative sector requires an acknowledgment of the fact that creativity, technology, sciences and engineering will continue to merge in an environment based on the rapid development of information technologies.
- For the purposes of this report we will focus on digital production domains that include visual effects, games production, streaming content and software production.

Education and the Value of the Creative Sector

Posing questions of “value” of any sector necessarily and traditionally involves a turn to data: more often than not economic. While many reports have already answered this question in terms such as those of the UNCTAD report of 2018 that note that creative goods represented \$509 billion dollars of trade globally, more than doubling from \$208 billion in 2005 [10], the significance of the creative sector runs far beyond its value in terms quantifiable in raw economic data. The less tangible value of, for instance, of the visual effects industry in New Zealand as a sector whose “halo” has seeded a rapid expansion in both associated digital entertainment businesses and a strengthening of the country’s university research and development environment has been studied. [11]

The question of less tangible value and the impacts of its relative invisibility becomes an important factor in determining educational policy. Alongside the increasing tendency for the creative sector and its related educational disciplines to combine artistic skills and technical capacity, there has been a related development at the other end of the spectrum for industry and education to presume that arts, humanities and

creative disciplines face decline. The rise of notions of “STEM” education (science, technology, engineering and mathematics) have received considerable push-back in many quarters on the grounds that the exclusion of the arts risks a failure to recognise the value that they embody in preparing the workforce for the lateral creative mindsets often required in future workspaces shaped by a growing creative sector. As a result, some institutions have instituted deliberate redefinitions of the STEM education as STEAM education (with the “A” standing for “arts”). This has been accompanied by a rise of reports [12] claiming that large corporations are in need of “soft” skills as much as “hard” science and engineering. Indeed, Google’s own “Project Oxygen” review of all hiring data gathered since the company’s inception concluded in 2013 that “soft” skills traditionally associated with the Arts and Humanities were far more important than STEM education. [13]

As the terms of debate shift regarding the educational needs of a networked world it seems unlikely that arts education will not include the increasing deployment of practice-based digital technology literacy and, in turn, that questions of value regarding arts and humanities

subjects will wane as they incorporate expanded computational capacities.

With these fundamentals of digital arts education in mind, the classic boundaries between high ranking and lower ranking tertiary education institutions should be closely considered when weighing up collaboration. While high ranking institutions can often bring greater resources to bear in adapting to the new environment that compu-

tation brings to research and education, they can also suffer the inertia of tradition. In recent years some observers have argued that moves by corporate actors such as Google could disrupt the tertiary education sector [14] and, regardless, it is clear that digital technologies can help emerging global tertiary institutions not currently considered top tier to play economic catch up [15] with their compatriots in the global north. [16]



Summary

- After a recent focus on science technology engineering and mathematics (STEM) there is an increasing awareness that arts and traditional forms of creativity constitute a highly valuable pillar of ongoing economic and technological innovation and trade.
- The importance of STEM education is increasingly being recast as an importance of STEAM education to include the importance of the arts.
- The future of the creative sector will increasingly lie in the convergence of traditional arts and humanities endeavours with emergent technologies that allow arts and sciences to be combined.
- While there was a rising understanding of the value of the creative sector amongst most governmental policymakers, the value of the creative sector is difficult to define in precise monetary terms.
- The trend of digital and computational technologies to effect significant transformation in tertiary research and education continues and is now impacting arts and humanities subject areas in ways already seen in technical disciplines.

The Impact of the Creative Sector on Economic Growth

The hard economic figures of the impact of the creative sector on economic growth are available but, as is often the case with subjects of analysis that have ambiguous boundaries, can vary depending on the study. The diversity of consensus here stems from the fact that creative sector exports (film and television content, design, music, games and software) are only one measure in a plethora of related economic effects the creative sector delivers. Another difficulty with the creative economy is the tendency of its output to be characterised by the production of what has been described as “intangible assets”: patents, copyright, franchises, goodwill, trademarks amongst others.

To take Weta Digital in New Zealand as an example, the company grew with meteoric speed over its first decade and ultimately put New Zealand on the global map as one of the worlds leading visual effects companies. In terms of exports, additional film contracts brought to New Zealand and brand power attributed to the country have been, in part, a result of Weta. The company’s rise was an impressive and oft sited cover sto-

ry, the economic impact of which could only ever be a matter of educated guesswork. Equally as important but no more easily measurable are the quantity of high value professionals who have come to New Zealand from across the industrial spectrum. These professionals have produced a positive feedback loop with a proliferating impact across the economy.

Visual effects professionals have seen creative coding skills, creative research talent from computer science and design to games production and start-ups feed into the R&D sector of New Zealand. This has had a positive mutual impact on the academic sector in New Zealand. For example, one of the authors of this report arrived in New Zealand from a PhD program in the United Kingdom a decade ago to study the relationship between New Zealand and California’s creative R&D tech industries.

The positive feedback loops that the creative sector have upon an economy are challenging to measure because they are complex, multifaceted, long-term and do not necessarily show up in immediate economic bottom-lines, as mea-

sured by standard trade and industry measures. What is clear, however, is that creative economies are economies containing a skills base primed to adapt to change. [17]

The late Sir Paul Callaghan [18] argued that for New Zealand's economy to break out of a medium intensity growth pattern that characterised the agriculture and tourism sectors, it needed an innovative and creative economy characterised by what he described as a transition from "Wool to Weta". Aside from the catchy phrase, Sir Callaghan's central point was that economic growth and the move from being a medium income country to that of a high income country with a strong per-capita GDP intensity could only be achieved by expanding the sci-tech industrial base of an economy. In this sense New Zealand and its Latin American partners, like the emerging markets of the Asia Pacific, all have a mutual commonality in looking to expand those areas of their economies that will allow them to expand the complexity and economic intensity of their countries.

Ironically, we would suggest that the next phase of New Zealand's economy could equally be characterised by a transition "From Weta to Wool" but perhaps not

in the way that one may first interpret this phrasiological reversal. Rather, the move from "Weta to Wool" could be described as the positive economic reward created when tech-based agri-research and bio-research see a commercial fruition of their methods that drive rapid economic efficiency.

In New Zealand, there are currently a number of new agri-tech start-ups that resemble the early days of the country's Visual Effects Industry when Film production was still considered a fundamentally entrenched analogue endeavour. With this in mind, it is worth asking to what degree has a creative industries sector (that has combined high value research, development and tech talent) had far-reaching positive economic ramifications in elevating the complex skill base of the country? Equally, one may ask, to what extent has this success come from pairing computational capacity with industry practice that had developed only incrementally up to that point.? To present this another way, the creative sector can be transformational across many levels of the economy when augmented with computational technology.

Indeed, a seminal Harvard economics paper from 1998 that attempted to delineate the nature of innovation argued that creative recom-

ination of already existing ideas was more impactful on a countries economic base than the fabled exponential growth often associated with computation. [19] In a technological and economic environment where networks can be formed and maintained at a global geographical scale, the potential for recombinant innovation is now broadening beyond the traditional industrialised hubs that both capital and education were commonly concentrated.

Such an environment is one in which New Zealand and Lat-

in American partners can benefit greatly in ways that their relatively distant geographies and industrial educational bases previously presented a challenge. Such an environment is one in which New Zealand and its Latin American partners should be looking to strengthen partnership for the future. Finally, such an environment is one in which international careers previously regarded as a symptom of “brain drain” now represent the highly valuable physical reinforcement of global networks that can offer current and ongoing payback.



Summary

- While hard economic figures on the size of the creative sector of most countries do exist, they do not provide a full picture of the creative industries impact upon an economy.
- Creative industries have both short-term and measurable economic impact, and long-term, less directly quantifiable economic impacts.
- More difficult to measure impacts of the “intangible asset” creation involved in creative industries include the attraction of talent, positive recognition, broadened industrial innovation and improved network effects and the attraction of globally mobile high-value skills communities.
- Both New Zealand and Latin American partners would stand to benefit if they developed trade partnership on the basis of the intangible benefits as well as the hard tangible benefits of deepening collaboration in the creative sector.

New Zealand



New Zealand has many advantages and a number of challenges in the global creative economy. The country's small size, high degree of interconnection, easy access to business networks, political leaders and policy makers, lack of corruption, positive environment for initiating business, ideal market testing demographic all work in its favour. To these positives can also be added high quality infrastructure (soon to see a further boost as its government rolls out an ambitious infrastructure improvement programme) and more recently internet improvements. On the other hand, relative geographic remoteness presents a challenge that the country has worked hard to overcome.

New Zealand's long running tendency to see a high proportion of its youth join a global diaspora of young people eager to see the world has often been regarded negatively as a "brain drain" problem. Like Ireland in the late 1990s as its "Celtic Tiger" economy saw a return of highly skilled nationals, it is now possible that New Zealand's past brain drain will be revealed to have a positive payback.

The past two decades have demonstrated that a country rich in high global network connection is well positioned to become a country able to leverage global economic connections. Into this mix, however, we must also add the impact of the effects of the global pandemic of 2020. While focusing on the pandemic to the detriment of all else would be unhelpful - it will after-all come to an end one day - to ignore its impacts would be remiss.

The world is by now familiar with the significant success story of New Zealand's initial world leading response to the pandemic [20] and the result has been an economy far less traumatised than would otherwise be the case. While it is important not to frame a globally disruptive pandemic in terms of advantage or disadvantage, New Zealand's handling of the Covid-19 virus has only enhanced the nations image abroad. However, while the initial wave of disruption was met head-on, it is certain that the lon-

ger lasting impact of the significant global economic shock will be felt in a country that placed global migration at the heart of its educational, industrial and economic strategy, with tourism set to face particular challenges.

Consequently, some of the "advantages" listed above that New Zealand enjoys have in recent months faced challenges. For instance, while New Zealand's small size and high degree of interconnection makes for an ideal start-up environment, the sudden halt of global travel and therefore skills mobility may pose a threat to the country's dynamism if prolonged.

Similarly, New Zealand's small size may furnish its business environment with agility and the potential to capitalise on first mover advantage but it may also pose a challenge in a global environment increasingly shaped by large bloc protectionism. In light of this, New Zealand may seek to pursue a multi-pronged approach to the creative economy over the longer term, that relies upon increased trade partnerships with smaller emerging market while still maintaining ties with established large-bloc trading partners. From this perspective, emergent Pacific Rim Latin American countries are a prudent location of potential creative industry partnerships.

Summary

- New Zealand has many advantages and in the global creative economy, not least a “first mover advantage” in many areas.
- Future policy in New Zealand will need a clear-eyed sense of its disproportionate wealth of creative economy assets and the importance of protecting and building upon them.
- Some factors, such as emigrating young talent regarded as a “brain drain”, that are seen as disadvantages, could turn out in the end to be an advantage for New Zealand in a highly networked global creative economy.
- The global pandemic has significantly impacted the global mobility of skilled creative economy talent. The impacts remain to be seen over the medium term, dependent on the course the pandemic takes.
- Obvious positive factors for New Zealand such as a small well-connected population will continue to aid an environment beneficial to creative industry start-ups but the impact of the global pandemic now presents a significant potential economic drag.
- Conversely, New Zealand’s small economic scale may also prove a disadvantage in enabling the country to capitalise on such start-ups beyond a certain point.
- In a global environment shaped by high debt and large bloc protectionism, New Zealand may seek to pursue a multi-pronged approach to its creative economy that relies upon increased trade partnership with smaller emerging markets while maintaining ties with established large bloc trading partners.

Mexico



In some obvious senses Mexico is divergent from New Zealand on a geographical, demographic and economic level. With a population of 126 million and a total GDP of 2.5 trillion USD the country is considerably larger than New Zealand. Similarly, Mexico is defined as a upper middle income economy while New Zealand now sits in the ranks of developed economies. However, Mexico presents a complex and diverse picture, not least because of its position bordering the United States. Like New Zealand, the North America features prominently in Mexico's trade equation (50% of Mexico's exports go to the US and Canada) and with that come many opportunities for mutual understanding and collaboration. Both New Zealand and Mexico pursue similar twin trade strategies: working closely with the vast industrial complex of the United States whilst synonymously developing an ongoing and growing relationship with China.

The UNCTAD Creative Industry report of 2018 put the value of Mexico's creative industries exports for 2014 (the last year with data) at \$5.2 billion USD, up from \$3.5 billion USD in 2005 (an increase of 67%). Of this, by far the lion's share of its creative industry exports were in Design. By contrast, Mexico's creative industry imports were more evenly balanced with arts and crafts, new media and publishing all making up a larger proportion (though Design still topped the imports list). America constituted 94% of Mexico's export market with Europe another 5% and Asia 1%.

Mexico's Tertiary Education System has several high ranking Universities with a century long academic tradition. The country's proximity to the intense dynamism of the Californian economy and university system should not be underestimated. Mexico's top ten universities all largely fall around the 700 – 800 benchmark on the global QS rankings. This statistic obscures the fact that many of these universities have specialist areas of research within them that place themselves in the global top 100. UNAM in Mexico City, for instance, has an Art and Design school ranked in the top fifty globally. Likewise, Tecnológico de Monterrey (ITESM) ranks highly on innovation indexes and is a highly dynamic global research and teaching institution. Beyond these

flagship cases, however, Mexico has a significant network of Technological Universities that present ongoing opportunities for dynamic innovation.

The disruptive opportunities of new technologies are, in many instances, seeing significant expansion in the newer Mexican technological universities as much as the traditional universities. With this in mind, there are opportunities for constructive research partnerships in the creative industry domain, should current and future governments recognise the opportunities and fund the sector overall appropriately.

At the beginning of 2020 the central question in relation to Mexico's ongoing economic future was that of emerging trade tensions and tariffs with its northern neighbour. In late 2020 this has, to some extent, reversed. The global pandemic and China's (so far) successful management of the disease has all but ensured any U.S. attempt to contain or push back against China will require a more sophisticated approach to its trade allies than it appeared to be demonstrating at the beginning of 2020.

Regardless of tensions between the US and China it seems that both emerging economies like Mexico and small nations like New Zealand will now be operating in a

multi-polar economic world than that which characterised the past fifty years. The question of how far US and Chinese tensions continue to play out as a divergence of technological infrastructure remains to be seen. However, but any elevation and intensification of this trend will pose challenges for New Zealand and Mexico alike and could become a key factor in shaping future trade partnerships between each. At present, the consensus [21] is that both economic and technological divergence between the United States and China will be both costly, difficult and slow to effect.

In the past, the penetration of costly high-tech equipment into education and industrial production was a roadblock for emerging economies, but as the cost curves of technology increasingly trend down, emerging market economies are seeing the rapid expansion of tech based capacity in their industrial base. For countries in Latin America this means that the bottleneck for the exploitation of technological capacity is less a question of cost and more a question of skills capability. Consequently, like many countries faced with the possibilities of cheaply available and networked computational technology, the challenge to exploiting it is one of educational innovation though perhaps not in the manner one would first expect.

While students require access to technical skills training, the emergence and impact of the computational revolution (a phrase that itself already sounds outdated) has been so rapid that educators themselves now require rapid and ongoing support to up-skill.

For many Latin American countries (as for New Zealand itself), the risk once their students and workforces have up-skilled is that of “brain drain” in a global economy where computational tech capacity is in high demand everywhere. Indeed, for countries like New Zealand, a significant component of economic policy has rested for years on what has been dubbed in academic studies of skills migration “global body shopping” as a means of counteracting the brain drain of their own young educated professionals. However, in the short term the global pandemic has put a sharp halt to these concerns. To what degree they reemerge will depend to a significant degree on three factors: 1. The length of time that the epidemiological crisis continues to impact the world. 2. The nature and shape of lasting economic impact the pandemic leaves behind. 3. The speed with which the global economy returns to “normal” if indeed it ever does do so, rather than seeing a new “normal” emerge.

With all of that said, the global pandemic has also demonstrated the

degree to which skilled creative economy labour can be undertaken remotely and could prove to be one of the truly revolutionary consequences of a global shut-down of physical mobility. Already media accounts are emerging of large streaming platform based visual effects productions completed entirely “at home”.[22] While this is consequentially negative for real estate values in previously highly competitive tech production hub cities it has the potential to radically alter the nature of the global high tech skills labour market. For countries like Mexico it stands to reason that the “brain drain” of creative industry talent it invests in may soon see significant economic return in the form of nationally-based talent earning and spending salaries derived from international careers initiated abroad. This is a dimension of creative industry “value” that did not previously feature significantly in the calculations of economic significance. In the medium term we can expect to see studies that investigate this question: If the pandemic affects a permanent shift the acceptance of remote work?

While the loss of highly educated and high demand talent to parts of the world where visa regimes and salaries enticed homegrown talent away has been a concern to countries in Latin America, this “loss” may now be mitigated if the two way flow of skills-based income is

facilitated by the necessary pragmatic responses to the pandemic. Ironically, this would represent precisely the opposite outcome that the Trump administration was seeking to achieve when initiating its demands to repatriate industrial production to the U.S. It also suggests that the global location of virtual labour could become a new populist political issue around which trade resentments are expressed, if the initially small scale trend toward remote high tech labour grows in a post-pandemic world.

With all of this in mind, significant potential exchanges of high-value skills experience and collaboration remain to be advanced between New Zealand and Mexico, should both nations approach the exchange as a non-zero sum means of building both network and labour resiliency and healthy ideas and innovation exchange in an increasingly complex and bifurcated global economic landscape.

Similarly, as America’s relative monopoly declines as a driver of global economic growth and the soft power that comes with it, it is possible that the mobility pathways of high value skills talent increase, i.e., they may look to diversify their range of destinations and opportunities. While the global economy is currently labouring beneath the twin impacts of a pandemic and its disruption to both production and mobility it is important to remember that this will pass.

Summary

- Because Mexico is a large and diverse economy closely tied to its northern neighbour, productive opportunities to do business with New Zealand in the creative economy exist.
- As with all Latin American countries, Mexico was seeing its GDP growth slow before the global pandemic emerged.
- The United States constitutes the overwhelming share of Mexico's export market.
- The experience New Zealand has in its own orientation toward the U.S. exports market means that there are many synergies of experience between New Zealand and Mexico.
- Mexico has a significant presence in creative industry education, with UNAM University for example ranking highly in the QS rankings.
- Not all migration of skills is created equally. Mexico has a strong and longstanding tradition of skills migration to the United States but current geo-political conditions are affecting that.
- There are significant potential exchanges of high value skills to be considered between New Zealand and Mexico should both parties look to develop them.







Colombia

By contrast to its Latin American counterparts, there is a sense in Colombia of a country still emerging from political conflict. While this has impacted Colombia's global economic integration up to now, there is a profound sense that the country is actively and enthusiastically engaged in the process of making up for lost time. One striking manifestation of this is the government's public support of the "orange economy" and a serious articulation of the potential for the fourth industrial revolution to aid the country in pursuing leapfrog development. Should this course of policy thinking continue it will likely see an expansion of the nation's creative sector.

Colombia has recently emerged from decades of a civil war the status of which is, to this day, still finely balanced. Discussion with locals in Colombia is often marked by an acknowledgment of the war, its effects and the hope that the peace process be a lasting condition (despite the fact that the process was initially unexpectedly rejected in a 2016 referendum on the matter; it was later ratified).

The UNCTAD Creative Outlook report of 2018 noted that Colombia exported \$358 billion dollars of creative goods in 2014, notably a drop from a high watermark of \$452 billion in 2012. [23] The majority of Colombia's creative economy trade export partners were located in the U.S. (95% of trade) with Ecuador, the United States and Mexico its top three markets.

Culturally and from a business perspective, in common with much of Latin America, a high value is placed upon personal relationships and the honesty of following through on one's word. When discussing potential partnerships in Colombia one of the frequent points of overlap with New Zealand culture is the idea of tight social bonds and honouring one's peers. In this sense, New Zealand's close sense of responsibility to each other and the collective is extremely important and should be a plank on which marketing in these regions is fo-

cused. By comparison with Mexico, however, Colombia's creative sector is far less industrially developed especially where technological resources are concerned. But, as is the story across the whole of Latin America, new media technologies are very rapidly entering the market and in many senses Colombia has greater and more rapid gains to be made as a result. As with China some three decades ago, New Zealand could benefit greatly from the collaborative possibilities that come from embracing partnership at the ground level.

Colombia's educational institutions currently reflect the effects of a long-term funding shortfall and a correlated shortage of high-value skills capability (many Colombians bemoan the fact that the war has caused decades of brain drain). However, this is likely to change rapidly as the benefits of a post-war settlement create a positively reinforcing improvement in the country's fortunes. Colombia has a number of factors potentially working in its favour. It is geographically situated on both the Pacific and Caribbean Atlantic coasts of the continent and, like its counterparts, contains a geography of spectacular natural beauty. It is one of the world's 17 mega-diverse countries with the second highest level of bio-diversity globally after Brazil. With such positives in its favour, and with the end of the civil war, it

is not hard to imagine that Colombia could start to draw in regional talent if it were to emerge as a local hub in Latin America and a crossroads between multiple geographical and economic regions.

From an industrial perspective Colombia's economy is largely agricultural. But should government support for the process of leapfrog development through technological, industrial and research infrastructural improvement be maintained, the country could quickly come to have a lot in common with New Zealand in the agri-tech space. As

discussed earlier, the degree to which this is considered the domain of the "creative economy" is up for debate. However, there is no doubt that advancing agri-tech in Colombia will come as a result of advancing the technological and research base of the country in such a way that will also see creative sector growth by default. Likewise, over the medium-term, potential synergies between New Zealand and Colombia's tourist industries may emerge if both nations look to pursue high-value (rather than mass market) tourism in a post-pandemic world.

Summary

- Colombia's emergence from its civil war has fostered an real enthusiasm for engaging with the outside world.
- The current Colombian government frequently supports the "orange economy" and champions the potential for the fourth industrial revolution to aid the country in pursuing leapfrog development.
- Colombia does not have the industrial or educational weight found in Mexico but as with much of Latin America, computational technologies and networked citizens are increasingly leveling the playing field and facilitating the potential for leap-frog change in the creative economy.
- Synergies between New Zealand and Colombia at the academic level are slightly more imbalanced than with large LATAM economies such as Brazil and Mexico for no other reason than the tertiary funding gap, but Colombia is likely to narrow the gap more rapidly if the payoff from the current peace accord continues.



Chile



Located on the Pacific with a coastline stretching over 4000 kilometers to the southern tip of the continent, Chile's geography varies significantly. In the South, areas of Patagonian Chile look and feel geologically similar to New Zealand's South Island. Indeed, the Patagonian hiking trails provide Chile with a shared commonality with New Zealand's tourist industry. By contrast, the North of the country features high altitude desert and an extractive economy based around the mineral deposits and increasingly solar farms: a geographical and industrial context more reminiscent of Australia.

Of the three main Latin American countries covered in this report, Chile shares a number of defining features with New Zealand. Geographically it is located on the Pacific periphery and somewhat more remote from the North Atlantic than its Northern and Eastern neighbours. Like New Zealand, China and South East Asia have been increasingly important to Chile's trade orientation over the last five decades. Chile was one of the first countries in Latin America to establish diplomatic ties with the Peoples Republic of China in 1970 (1972 for New Zealand) and has seen trade ties with both the North and South East Asia regions expand rapidly ever since. Given its abundant resource extraction economy, China constitutes Chile's main export partner by some margin (27%) followed by similarly tech heavy economies U.S. (14%), Japan (9%) and South Korea (6%).

With a high income economy and a nominal GDP ranking 41st in the world, Chile is amongst the most prosperous in Latin America. The UNCTAD Creative Outlook report of 2018 noted that Chile exported \$276 Billion dollars of creative goods in 2014. In common with Colombia, this was a drop from a high watermark of \$450 billion in 2011. Notably, exports in publishing dropped considerably over this period whilst audiovisual, design and new media exports all increased,

conforming to a global trend for news media publishing to have collapsed in the face of a zero marginal cost economic environment [24] of internet news and for digital creative entertainment content to grow. Again, like Colombia, the majority of Chile's creative economy trade export partners were located in the Americas (94% of trade) with Peru, Bolivia and Paraguay its top three markets followed by the United States. The creative industries in Chile comprise more than 30,000 companies and generate 6% of all jobs in Chile. 99% of these companies are categorised as micro, small- or medium-sized companies, while just 1% are considered large.

Like New Zealand, Chile is an active location site for film production. Having a similarly varied geology and ecology to New Zealand, high quality sunlight and a supportive government, there are many potential crossovers in film set expertise and talent. Alongside this comes visual effects and post production which, while still small is seeing growth as the skills base in the country expands and as global streaming giants increasingly pursue a strategy of local market production. Likewise, Chile has a small but active and expanding games industry with sales growth increasing 275% between 2010 - 2014 [25] and active companies growing from 14 in 2011 to more

than 60 in 2017 [26]. In 2016 the games industry saw the departure of two large foreign companies (DeNA and Behaviour). However, the loss to local industry was tempered by the fact that these events left behind a breadth of talent that bolstered the local industrial creative ecosystem. Nonetheless the industry is still small in global terms generating just \$8 million USD of revenue in 2017 with 95% of companies classified as very small.

Despite this, and in common with its neighbours, Chile has a growing digital production base of which game production is one component. The emergence of digital creative production across the LATAM continent has been recognised as a trend that could emerge to constitute an engine of growth over the next decade. However, the most recent economic report on this subject [27] was published in January of 2020, just before the global pandemic swept the world. The extent to which the creative sector of Chile and the wider continent continues its growth trajectory will depend upon the strategic support that post-pandemic governments can provide to their digital production sectors.

In the research, development and educational sector, Chile's steady economic growth has allowed the country to grow its tertiary sector over the last half a century. With 25 "traditional" government funded uni-

versities, Chile has a healthy tertiary sector. However, with a very high degree of private tertiary providers and over 80% of students enrolled in private education the sector is regarded amongst the most expensive in the world relative to incomes and has been a driver of calls for change and significant protests in the country. [28]

At 61 universities (mostly based in and around Santiago) Chile still far outnumbers New Zealand for quantity. Two of Chile's Universities are in the top ten QS Latin America University Rankings. Additionally there are a wide range of Professional Institutes and Technical Training centres. Unsurprisingly Chile's top university (Universidad de Chile) ranks highly in mineral and mining engineering. Situated in an earthquake prone region it also features a strong architectural tradition with clear cross-overs with New Zealand. Significantly, the Universidad de Chile also scores highly in both Arts and Humanities (110 in the global rankings) and in Engineering and Technology (138 in the global rankings). The high ranking of these two subjects and the relative parity of them bodes well for New Zealand's capacity to build bridges with Chile in creative economy research and teaching. Though, to some extent, collaboration between institutions often relies upon individual relationships in the field of research.

Summary

- Of all the LATAM countries, Chile has some of the closest geographical commonalities with New Zealand.
- Chile's economy resembles something of a hybrid between both New Zealand (tourism) and Australian (extraction) economies.
- The creative industries share of the economy in Chile has been growing rapidly, albeit from a low base.
- As with most LATAM countries, Chile has a University tradition going back 150 years and more.
- With a high income economy as ranked by the World Bank, and a nominal GDP ranking 41st in the world, Chile is amongst the most prosperous in Latin America.
- The extent to which the creative sector of Chile and the wider continent continues its growth trajectory will depend upon the strategic support post-pandemic governments provide their digital production sectors.



Brazil

(Additional)

While Brazil is not a focus of this report it is necessary to touch on it for no other reason than its size and influence in Latin America. Brazil's geographical scale, resource load, research budget and strong historical ties to Europe make it a linchpin country in the block. Alongside other Latin American countries, Brazil's GDP growth slowed significantly over recent years and in 2015 and 2016 entered negative territory before returning to low growth (relative to its performance in recent decades). As with other Latin American countries, China and Southeast Asia have been a growing force in the resource export led section of the economy. China has been developing large infrastructural networks to aid it in its resource demand and this has extended to a number of infrastructural projects connected to the Chinese Belt and Road initiative in Brazil.

Brazil's presidency is currently occupied by a populist far right wing president who has forged close ties with the Trump administration. This has lent a degree of complexity to any medium term predictions regarding the future course of the global trade and technology landscape. As with its LATAM Pacific neighbours, Brazil's relationship with China and the U.S. is both complex and finely balanced. Though on the trade front it is China and the European Union that constitute Brazil's first and second export and import partners with the United States ranked third in both cases. Due to the highly dynamic nature of global politics and global economics both before and especially since the emergence of the global pandemic, it is difficult to predict where the complex and sometimes contradictory combination of political and economic commitments of Brazil will lead.

Earlier in this report it was noted that the combination of novel technologies in genetics and agribusiness could in the medium to long-term come to be augmented by the start-up culture of the tech and creative industries. Should this come to pass (and private interests are now producing advertising content claiming that it already is [29]), Brazil

stands a very good chance of featuring as a key player. New ways of developing agribusiness over the medium to long-term will also require a wide range of creative solutions as the pressures of climate disruption intensify.

Just as the film industry was revolutionised in New Zealand by the emergence of computational technologies, allowing the country to become a global player, so too could biotech shape similar developments in Brazil's agriculture and bio-diversity sectors. Of all the countries mentioned in this report, Brazil has perhaps the largest most well-funded tertiary education and research sector of which FAPESP (the São Paulo Research Foundation) is the largest publicly funded research grant awarding body. FAPESP distributes significant research funding and has identified priorities in areas such as genomic science and industrial innovation. While this is traditionally seen as a scientific research Foundation, its function in inevitably driving pure and applied technological innovation over the medium-term makes FAPESP a force that creative industries players should not overlook.

Unsurprisingly given the profound wealth of longstanding creative

cultural capital in Brazil, the country maintains a large, vibrant and economically significant creative sector. A British Council Report of 2017 estimated the creative economy of Brazil to employ 1 million people, support 200,000 creative businesses, and account for 2.64% of GDP and \$10 billion USD in federal taxes. [30] Perhaps more importantly it also estimated an annual growth rate of 4.6% per year (double the growth rate of the Brazilian economy) and estimated that the sector in general would grow to \$43 billion USD by 2021.

In light of the global economic shock brought about by the Covid-19 pandemic, the final annual growth rate metrics over the next five years will likely require revision. However, it is also likely that in Brazil's creative

economy, as with others around the world, not all creative sector companies and industries will turn out to have shrunk or grown equally. It has been frequently noted throughout the 2020 pandemic that demand for certain creative content has greatly increased in an environment in which physical distancing has facilitated conditions that favour networked entertainment and social interaction. Beyond the very obvious explosion in demand for video conferencing platforms, there has also been a marked increase in demand for both games and streaming content, while live performance has by necessity collapsed for the time being. With this in mind, future consideration of the creative sector in both Brazil and the wider LATAM region will involve a reappraisal of the sector on a case by case basis once the dust settles.

Summary

- Brazil has the largest economy in Latin America and as such should be considered in any LATAM creative sector strategy.
- In 2015, Brazil's economy entered negative territory and as such its current political shift to a far right wing populist president can and should be understood in this light.
- A 2017 evaluation of the creative economy of Brazil estimated it employed 1 million people, supports 200,000 creative businesses, and accounts for 2.64% of GDP.
- As a BRIC (Brazil, Russia, India, China) economy, Brazil's GDP slowdown and subsequent populist president could represent the future path of other LATAM countries should economic conditions deteriorate across the continent.
- Brazil's agricultural economy could have significant overlaps with New Zealand over the medium term as creative solutions to pressing problems of climate change become increasingly necessary.

The Future Value of the Creative Industries to Industrialised and Industrialising Economies

Growth was already trending down across the world at the beginning of 2020 and before the global pandemic emerged. There was much discussion of global recession, trade faltering and major export economies heading into recession. Since then the pandemic has emerged as the largest economic shock to global growth since the Second World War. Even before the pandemic, demographic trends were leading some economists to question whether traditional measures of GDP growth still made sense for a world reaching significant material and ecological limits. Likewise, there had been a distinct absence of inflation in the global economy in recent years with many theories about why but no confirmed agreement on the overarching motivation for the phenomenon. The initial stages of the pandemic at least have only exacerbated deflationary trends.

It seems clear the world is at a crossroads economically, a fact highlighted by the highly unorthodox global financial geography: increasing trade tensions, the growing tendency of central banks to reduce interest rates below zero

and inject emergency liquidity into their economies. Against this background the neo-liberal model of capitalism that appeared to serve some segments of the world well over the past four decades was facing increasing challenge amongst policymakers and populist governments alike before the pandemic. In its aftermath, many neo-keynesian economic policies previously regarded unthinkable have started to gain popularity in policy circles as governments “pump prime” their economies in the face of unprecedented supply and demand shocks. In this new global economic environment the biggest question for the creative arts sector will be the degree to which governments choose to support their creative economies.

If the global pandemic has proved anything in relation to the creative sector, it is that demand for digitally produced and distributed content can weather the most dramatic and unexpected of global economic calamities. Indeed, as billions of people around the world went into lock-down in the first half of 2020, the digital arm of the creative sector emerged as an essential service

globally in a manner that would have been considered the realm of speculative fiction before the emergence of Covid-19. When the pandemic finally runs its course it is hard to imagine that the digital creative sector will not come to be seen amongst policy makers as

an essential, and essentially resilient, component of a nation's healthy economic base. For Latin America as for New Zealand this will surely make for an important premise upon which to base future trade-based collaboration and cultural partnerships.



Summary

- Growth and trade are currently clearly trending down across the world. Many challenges lie ahead for both industrialised and industrialising economies alike.
- Changing demographic trends alongside the emerging and intensifying challenges of global warming mean that traditional measures of GDP growth are likely to be supplemented by questions of population well-being.
- In the short to medium-term the challenges that the global economy faces can only be met if creative thinking and innovative solutions are proposed and attempted.
- In such a context, New Zealand stands to benefit because of its position as a testing ground for cultural and technological products and as a country able to move quickly when needed.
- The tendencies of policymakers in emerging economies to seek innovative ways of leapfrogging incumbent industrialised economies through transformational technologies, creative thinking and bold solutions makes Latin America a natural partner for New Zealand when seeking global creative industry partnerships.

Conclusion

Latin America had seen a reduction in GDP growth in recent years before the global pandemic emerged in 2020. The creative industries sector of Latin America constitutes a lower percentage of most countries respective economies relative to the global northwest. However, considered in light of the scale of the Latin American economies as a whole, and a function of the numbers of people employed in the sector relative to New Zealand's small population, there are clearly a great many opportunities for creative sector trade and education flows. While the global pandemic has had profound and unexpected consequences for both local and global economies, a revealing consequence of physical distancing and rolling lock-downs has been the way in which it has demonstrated a resilience of industrial sectors heavily integrated with the networked virtual economy. While arts sectors around the world are suffering in 2020, it is likely that the conclusion of the global pandemic will leave behind a landscape in which the digitally connected creative economy stands as an appealing growth prospect for governments looking to rebuild. Much will depend on post pandemic government economic policy choices, but in all eventualities, New Zealand should engage other Latin American countries that have emergent skills bases in the creative industries, with a view to collaborating in the ongoing creative industrial revolution. There are many potential upsides to New Zealand engagement with Latin America and few downsides to increased collaboration.

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Note on Images and Report Design.

All Images featured in this report are supplied by LATAM Games companies involved in the wider international creative industries collaboration project associated with this report. Country images and all report design was completed by Leon Gurevitch

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