

The puzzle of Macao's talent development

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Abstract

Purpose – Talent development has become an important policy given prominence by the Macao government since Fernando Chui became its Chief Executive. The purpose of this paper is to review human resources and talent development policies in Macao and discuss the difficulties and challenges that they pose.

Design/methodology/approach – Using Macao as a case study the paper indicates the difficulties and challenges experienced by emerging markets in fostering talent development for the sustainability of their local economies.

Findings – This paper finds that, as an emerging market, Macao has to solve and overcome its institutional deficiencies (namely, by the establishment of both a professional registration regime and the means to gather metadata to enable predictions of the talents needed for the local economy and their potential scale) so as to please stakeholders. Only then can it truly introduce talent development schemes and programs.

Originality/value – There have been very few studies on Macao's talent development initiative. This paper tries to fill this gap in the existing understanding of talent development.

Keywords Talent development, Talent, Human resources management, Professional registration

Paper type Case study

Introduction

Talent-hunting is a global phenomenon. Economic development relies on technological innovation (Gordon, 2012, p. 43; Benest 2008). Developed countries aim to create economic sustainability by recruiting talent that can steer their domestic economies onwards, while emerging markets push hard to absorb talent and to boost their economies. Developed and developing countries are looking and competing for talent for the purpose of economic development, and all are facing the pressure of talent shortages. Because of the globalization that allows highly skilled workers to migrate easily, the demand for talent is unexpectedly high. Every country needs to enlarge its talent pool and construct a pipeline to secure the smooth circulation of talent in its domestic marketplaces.

In the case of Macao, the shortage of human resources has been of concern for its economic growth. After its return to the motherland of China in December 1999, Macao's GDP increased by 8.7 times between 2000 and 2014 (in terms of its current rate), to MOP\$443,298 million in 2014, while its population increased by 47 percent in the same period, from 431.5 thousands to 636.2 thousands (Statistics and Census Bureau). Macao's population size is not sufficient to sustain the economic boom that has occurred since the liberalization of the gambling industry. Thus, the importation of labor has become a major strategy to fill the demand for human resources in the economy. Nevertheless, though the quantity of labor available is not sufficient to guarantee further economic growth, its quality seems to be more important if Macao is to maintain its competitiveness and, hence, to continue its economic development.



When Hu Jintao, the President of the People's Republic of China, visited Macao in 2009 for the celebration of the tenth anniversary of the establishment of the Macao Special Administrative Region (MSAR), he remarked that talent development was the most critical factor for maintaining Macao's competitiveness and its adaptation to changing socioeconomic circumstances (*Macao Daily News*, 2009). Fernando Chui Sai On has placed an emphasis on talent development in Macao since becoming the Chief Executive of MSAR in December 2009. Indeed, talent development has been regarded as a key means for diversifying Macao's economy. It can improve the quality of Macao's human capital and provide professionals with experience in various industrial sectors, instead of relying on the gaming industry for the MSAR's economic sustainability. For instance, the MSAR government has already identified the Chinese medicine, culture and creative industries as potential areas for Macao's economic diversification. The supply and recruitment of talent from these industries will be crucial for their development in Macao. Furthermore, talent development can also be presented as a means for securing the upward mobility of Macao's citizens. Individual citizens can improve their skills and professional knowledge in the developing economic sectors, and hence can be promoted to advanced positions. Thereby, they can receive better salaries and job benefits and improve their living standards, providing enhanced social stability. However, Chui's government has yet to make a significant move to establish talent development in its first term. This paper reviews human resources and talent development policies in Macao and discusses the difficulties and challenges they face.

Talent development and its strategy

Generally, talent can be regarded as a group in a minority of a population who are possessed of intelligence and specialized skills and who have higher levels of competency than their peers (Howe and Davidson, 1998, p. 399). Gagne defined talent as "the outstanding mastery of systematically developed abilities or skills and knowledge in at least one field of human activity to a degree that places an individual at least among the top 10 percent of age peers who are or have been active in that field or fields" Gagne (2004). Their ability may be innate, which is a gifted talent, or it could have been developed by training. Disregarding innateness, talent is expected to be transmitted for the improvement of productivity and the well-being of a society (Roberts, 2008). For instance, the Chinese government considers talent to be an element that will promote the future economic development of the country (Chinese Government, 2010). Yet, the transmission of talent to correspondent fields and positions in the labor market is necessary to fuel the economic engine.

The idea of talent development has emerged as a strategy for fostering innovative, qualified talent for the sustainability of a society. Talent development, defined by Gagne (2004, p. 121), is "a process in transforming specific natural abilities into the skills that define competence or expertise in a given occupational field". The success of talent development is dependent on how the talented can be mined and nurtured and how they can be placed in the fields and positions where they can contribute effectively to the development of society by deploying their intelligence and special skills.

In every society, education and training are always relied upon for talent development. In the context of talent development, education means not only the teaching of knowledge to individuals, especially the youthful, but also the facilitation of opportunities for individuals to excel at a higher level (Roberts, 2008, p. 501). Roberts (2008, p. 502) proposes three stages of talent development in the school system to

nurture children's talents. First, children must be guided to select a field they love and be educated in its basic skills. Second, children should be trained for competence in the field, and third, those with identified talent in a field will have opportunities to develop levels of expertise. The USA tries to incorporate talent development programs into its education system. In schools, American students can participate in various talent development schemes, which aim to help them to discover and develop their talents during the complementary education phases (Roberts, 2008). The intention of this approach is to try to identify young talent and develop its expertise, and, hence, to cultivate a considerable number of well-educated, talented future workers. The US Government also promotes talent development via on-the-job training in order to improve the skills of workers when dealing with the needs of their jobs. Regional Talent Innovation Networks have emerged as another means for achieving this purpose (Gordon, 2012, p. 46). These regional networks are partnerships between businesses, communities and governments which provide a wide range of programs for promoting talent development. Corporations and governments work together to train workers, especially for the development of talent at the skill-application level. In a manner similar to the US approach, the German Government emphasizes youth talent development in its school system. It tries to categorize the areas of specialty of every student in high school. Students can attend vocational schools where they will be trained with skills and knowledge relevant for particular industries and they can gain working experience via internships (Schmidt and Alex, 1995). When children finish primary school, their teachers recommend to their parents whether children should receive either regular or vocational education based on the potential of the students (Chang and Yu, 2014). Vocational training aims to prepare the students for career development in an industry where they have talent and that supports the development of the industrial sector.

Another approach to developing talent is via importation. Singapore is almost an exemplar of successful talent development achieved by importing foreign professionals. The Singaporean government relies on the importation of foreign workers and talent to sustain the country's domestic economic development because its relatively small population size cannot provide the human capital needed to sustain the economy (Koh, 2003). The decline of the fertility rate there has further curbed the capacity of the local population's domestic human capital development. Therefore, to be compatible with a growth economy and to satisfy the demand for human capital, the Singaporean government opened up its labor market to foreign professionals. In 1999, it published *Manpower 21: Vision of a Talent Capital* and identified six strategies for talent development, including: integrated manpower planning; lifelong learning; augmenting the talent pool; transforming the work environment; developing a vibrant manpower industry; and forging stronger partnerships between the public, private and people sectors (Ministry of Manpower, 1999). However, the Singaporean Government still focussed on the recruitment of foreign talent as its strategy for human capital development (Low, 2004).

The third approach to talent development is to encourage the return of talent. Globalization means that some local students will study abroad, and some of them may stay overseas for their career development after graduation. Therefore, overseas talent becomes a source that complements the domestic human capital. For instance, China has largely advocated the return of overseas talent (Chinese Government, 2010). Since its open door policy began in 1978, Chinese students have been going abroad to study because of the underdevelopment of the local education system. Many of them

have been trained at world-class universities and have learned advanced technologies and skills. However, some of them have not returned to China, but developed their careers overseas. The pool of overseas Chinese talent is rather large; therefore, the Chinese government has introduced various schemes (e.g. the Hundred Talents Program, the Recruitment Program of Global Experts, and the Scientific Research Foundation for Returned Overseas Chinese Scholars)[1] to attract overseas talent back to China to develop their careers.

Most countries explore the above approaches to talent development, though their emphases vary. Adoption of these strategies is, to an extent, determined by public views on talent development and social constraints and limitations. Talent is regarded as one of the tools and means for economic development, and governments introduce talent training schemes and programs to fulfill business demand. The development of an individual's innate talent may not be emphasized by such schemes, such that some individuals may not have a chance to develop talents in areas that make lesser economic contributions to any given economy. This is because an emphasis on the development of an individual's gifts and talents may not serve the purpose of general economic development, even if it fulfills an ambition for individual growth. Should we focus on vocational training for economic growth? Or should we use talent development programs to identify individuals' talents and develop their abilities and skills in those areas? By answering those questions, the public value placed on talent development shapes the eventual strategy, especially the educational approach employed.

The adoption of talent importation is heavily reliant on local acceptance. There is always a concern that overseas professionals, regardless of whether they are recruited temporarily or migrate locally, will limit opportunities for local people to fill senior/professional positions. Tension between local and overseas professionals is always the result. Moreover, the cultural disparity between local and overseas talent may intensify these tensions. The extent to which local people accept talented foreign professionals hints at the extent to which a talent development strategy based on labor importation might work.

The emphasis on finding talent among returnees is dependent on the amount of local talent staying overseas. Moreover, the willingness of once-local talent to return to their birthplaces is determined by the suitability of career development there, as well as the quality of life possible locally. So, due to local circumstances, a government places different degrees of emphasis on its various strategy approaches to talent development.

In the following section, we will review talent development in Macao to understand the Macao government's talent policy in terms of the three approaches identified.

Talent development policy in Macao

Macao is a gaming city, the economy of which has relied heavily on the revenue generated from casinos since the Portuguese colonial era. The concept of talent once seemed to be insignificant for Macao's economy. Nevertheless, as a small city with a population of several hundred thousands, Macao lacked the human resources for the maintenance of its industrial sector. In the 1980s, the Macao government began to import cheap migrant workers in order to aid the declining manufacturing industry (Choi, 2005). The importation of workers became a major element of the Macao Government's human resources policy, while talent development was not an issue for the colonial regime.

The concept of talent appeared on the government's policy agenda after Macao's return to China in December 1999. In his 2002 policy address, Chief Executive

Edmund Ho Hau Wah indicated that his government would aim to develop talent capital for the city in response to the global competition for talent. Although education was emphasized for the improvement of the quality of local human capital, the importation of talent was key to the improvement of Macao's human capital quality in the early days of the MSAR. The Macao government applied more resources to education and introduced a 15-year free education program in 2008[2]. Though the quantity of education increased, the measure did not do much to enhance its quality. It has to be noted that there is no common curriculum for Macao's primary and secondary school systems (Guo, 2009). School managements have the autonomy to design their own curriculums with little government interference. The Macao Government merely subsidizes schools; it has not influenced the teaching content because of the complex political relationship between the government and school managements (Lee, 2013). Thus, the Macao Government lacks the crucial capacity to steer the education sector to deliver an education that corresponds to the needs of economic development by aiming to train talent for different industrial sectors. That incapacity exacerbates the inconsistency that exists between the education that Macao delivers and the economic development it aims to achieve. In addition, the effects of education strategies on the supply of talent are not immediate; rather, education has to be undertaken as part of a long-term strategy. Therefore, the Macao Government focussed on the importation of talent as a quick fix to its talent deficit.

Chief Executive Edmund Ho indicated that nonlocal talent could stimulate competition in the labor market and, hence, could motivate local people to strive for knowledge enhancement (Macao Government, 2004). However, the MSAR government does not have any special measures or schemes in place for the recruitment of nonlocal talent. It has relied on the migrant worker laws, passed in the 1980s[3], for the recruitment of both skilled and unskilled laborers from outside of Macao. In 2009, the MSAR passed a new "Law of the Recruitment of Migrant Workers" (Law No. 21/2009). These laws merely regulated the responsibilities of employers, the benefits for employees, and the procedures and administration for the application of the migrant workers' quotas. It did not state any policy for the importation of talent – for example, no detailed qualifications for nonlocal professionals were specified nor were the type and quota of talent to be imported stated. The government department that approves migrant worker applications was left with great discretion to decide the numbers and the qualification levels of migrant professionals admitted to Macao[4].

To retain nonlocal talent, the Macao government has an immigration policy that can grant them residency. According to Administrative Regulation No. 3/2005 "Temporary Residency to Investor, Management, and Technical Personnel," migrant professionals can apply for residency in Macao if they have completed tertiary education and their education background is highly relevant to their employment in Macao. The Macao Trade and Investment Promotion Institute (IPIM) of the MSAR is responsible for approving the residency applications of nonlocal talent. As with the approval of migrant worker quotas, IPIM has huge discretion on who receives approvals of residency. Although the regulation indicates that the IPIM investigates each application based on the applicant's academic qualifications, the nature of their job, their salary level in Macao and the demand for corresponding professionals in Macao, etc., there is no objective index for the assessment of the mentioned criteria. For instance, there has been no official index reflecting the demand for various types of professional in Macao's job market.

Thus, the policy of nonlocal talent recruitment is not well institutionalized because, though a framework was created, its details have not yet been filled in. In the first decade of the MSAR, the government paid more attention to economic development as

the economy was in recession right before the handover (Scott, 2011, pp. 6-8). The MSAR government had favorable policies for its business sectors and greatly increased the quota of migrant workers due to the shortage of human resources. In particular, the liberalization of the gaming industry, which broke the monopoly of the Sociedade de Turismo e Diversões de Macau, led by Stanley Ho for four decades, resulted in more casino concessionaires running gambling businesses in the MSAR. The casino concessionaires demanded a huge amount of labor and professionals for the construction and operation of their gigantic casino hotel malls. Hence, the number of migrant workers increased from 32,183 in 2000 to 170,346 in 2014, a 430 percent growth in 15 years Statistics and Census Bureau. The government was not motivated to go further and institutionalize a talent development policy for migrant worker because that might have resulted in inefficiencies in the quota approval and hence, hurt important business interests.

The gaming industry boosted Macao's economy and made the city the most productive in Asia, bringing it to fourth place in the world in terms of GDP per capita in terms of dollar purchasing power parity (*Apple Daily News*, 2014). Gaming income has made up almost 80 percent of the MSAR's GDP as well as 80 percent of the government's revenue (Yazhou ZhouKan, 2015). However, the dependence of the Macao economy on the gaming industry caught the attention of Beijing. As Mainlanders were the major source of gambling revenue in Macao, this had led to the outflow of Mainland capital and also brought the social issue of problem gambling to the fore in Mainland society. Hence, Beijing encouraged Macao to diversify its economy and to develop other business sectors, instead of focusing on the gaming industry. However, such economic diversification was impeded partly because of the shortage of talent in other economic sectors.

Even so, more and more local people began to complain that many senior positions in workplaces were occupied by nonlocal talent and that local people had little chance of getting promotions that would boost their upward mobility. Rising public discontent with the recruitment of nonlocal talent threatened to put social stability at risk, as the government had not revised its talent development strategy, and continued to rely on the importation of labor which undermined the interests of local people. Therefore, Chinese President Hu Jintao reminded the Macao Government of the necessity for talent development as a means to enhance economic competitiveness when he visited Macao for the celebration of the tenth anniversary of the MSAR in 2009.

Thus, the concept of talent development became a concern for Macao's society. Fernando Chiu Sai On, who became the Chief Executive in December 2009, placed more emphasis on discussing talent development at the outset of his government. In his first policy address, he clearly stated the importance of the development of local talent through education (Macao Government, 2010). In his first term (2009-2014), he stressed the need for talent development planning and tried to create a database for talent (Macao Government, 2013). However, no concrete plan or policy was proposed. In 2014, he decided to establish a consultative body, the Talents Development Committee, to help propose policies for talent development. The committee is responsible for advising the government on its talent development strategy, suggesting schemes and plans to attract the return of overseas Macao talent, and encouraging international cooperation for Macao's talent development (Dispatch of the Chief Executive, 2014). The committee's nature is more than consultative; it can also serve as a platform for the coordination of talent development among various of the MSAR's stakeholders. The Chief Executive is the committee chairman. Members include senior officials (namely, the secretary for social affairs and culture; the directors of the Tertiary Education Services Office, the

Education and Youth Affairs Bureau, the Labor Affairs Bureau, and the Policy Research Office of the MSAR as well as the president of the Administrative Council of the Macao Foundation). The Committee also comprises leaders of local tertiary institutes (i.e. the rectors or presidents of the University of Macau, the Macao Polytechnic Institute, the Institute for Tourism Studies, the Macao University of Science and Technology, the City University of Macau, the Kiang Wu Nursing College of Macau, and the Macao Productivity and Technology Transfer Center), as well as representatives from the business sector, leaders of social groups and academics development (Dispatch of the Chief Executive, 2014).

Clearly, the chief executive has tried to line up the corresponding government departments, local tertiary institutes, and business leaders for the formulation and implementation of a talent development policy. In terms of a talent development strategy, though, Chiu's Government seems to shift restlessly from the importation approach, to education and training, to the return of overseas Macao talent. The Talents Development Committee has formed a Task Force of Talents Training Program for the education and training of local talent, as well as a Task Force for Encouraging Talents to Return to Macao (Talents Development Committee, 2014). With the participation of relevant government departments and tertiary institutes, the Committee has tried to coordinate the various public bodies it has partnered with to design and offer training programs for local talent. The members can also connect with overseas Macao talent to help with their possible return through their international networks. In addition, the Committee has carried out strategic planning for long-term talent development, by forming a Task Force of Planning and Evaluation that is responsible for the forecast of talent needed in various sectors and for suggesting long-term plans for talent development.

The Talents Development Committee is regarded as an engine pulling the government administration, as well as a societal force for talent development. The Committee has introduced some programs and plans for training local talent (e.g. the subsidy scheme for attending the Global Leaders master's course at the University of Cambridge, possible cooperation with the United Nations Educational, Scientific and Cultural Organization for an internship program for Macao students, and possible cooperation with universities in Portugal for talent and professional training programs) (Talents Development Committee, 2015). A Macao talent database has been established for long-term planning, and Macao citizens are encouraged to submit their personal information, as well as their professional training and qualifications, to the system. The Committee organized for a group of overseas Macao talent to revisit Macao and encouraged them to return to Macao for their second career (*Macao Daily News*, 2015a).

The inauguration of the Talents Development Committee is a step forward for the MSAR government in talent development. Certainly, the Committee is at its embryonic stage and has not yet yielded long-term talent development plans or systematic development programs. Perhaps, the Committee will take time to show its capacity and capability for talent development. Talent development in the MSAR is going to be an uphill process.

Key issues of Macao's talent development

Macao's society has a certain level of consent for talent development. Various bodies have suggested such ideas as cooperation between the government and business sectors for training talent, long-term strategic planning, forecasting talent demand, and training young talent at school (Aomen Rencai Kaifa Yu Peiyang Xingjiu, 2015; Leong, 2006). The private sector, responding to the Macao government's advocacy of talent development,

has begun to introduce in-house training programs for their staff that aim to improve employees' skills and abilities so that they can apply for senior positions. For instance, the various casino concessionaires now have training programs for local staff and have promoted many of their graduates to senior management positions (*Citizen Journal*, 2015a, b; *Macao Daily News*, 2015; *Cheng Pao* 2015)[5].

However, the Macao business sector always complains that Macao is lacking in human resources, and businessmen find it difficult to recruit local people for both skilled and nonskilled positions (*Macao Daily News*, 2014). Indeed, Macao's unemployment rate was down to 1.7 percent in 2014, reflecting a full employment phenomenon (Vickrey, 1993)[6]. Some businessmen argued that if they promoted local people to senior positions, they would not be able to recruit staff to replace them for junior posts. Therefore, businessmen have pressed the Macao government to approve more migrant workers. However, labor groups have opposed further increases in the migrant worker population in Macao and argued that the importation of labor suppresses salaries and benefits for local workers. In addition, the importation of skilled labor and professionals limits the upward mobility opportunities available to local young people (*Citizen Journal*, 2015a). The debate about the importation of labor has partly been caused by the relative opacity of the migrant worker approval mechanism that has publicized no official quota for imported labor. To balance the interests of the business and labor sectors, a quota system which defines the number of migrant workers and professionals in various economic sectors and at different professional levels is needed. A quota system heavily relies on human resources surveys to indicate the levels of demand for professional and labor forces and the size of the local supply of human resources, plus the estimation of the numbers of workers needed to be imported. The Task Force of Planning and Evaluation of the Talents Development Committee aims to build a mechanism to estimate the demand for talent in the local economy. However, the government must have a good definition for professionals in different sectors before it can institute a comprehensive database of talent.

Generally, there must be a registration mechanism for the identification of an individual as a professional in a sector. However, with the exception of lawyers, who can register at the Macao Lawyers Association, Macao does not have a well-established professional registration institute for the recognition of talent in professional areas. Neither does Macao have registration for professions as common as medical doctors, nurses, engineers, accountants or teachers. Rather, the government has set up committees for some professional sectors that rely mainly on professionals' whose educational backgrounds and affiliations with professional groups outside the territories are their sources of professional recognition. Chiu's Government tried to establish a registration institute for every professional, but the recognition of professions, *per se*, was politicized by the authorities' perceived need to balance the interests of various interest groups practicing in the professional sector. For instance, the government proposed the registration of social workers that would have allowed people whose job is similar to a social worker's in nature to register, even if they had not received any professional training. Obviously, such a proposal faced opposition from qualified social workers who had passed validated training programs (*All About Macao*, 2015a). By contrast to the generosity of the proposal for who should be registered as social workers, a proposal for the registration of nurses seemed to be needlessly over-restrictive. The Macao government proposed that a student nurse could not register to be a nurse immediately after graduation, but would have to take an examination to enable successful registration. This proposal was opposed by nursing students in Macao, who argued that

the nursing school programs had been approved by the government, and so they should already be recognized as having an adequate enough professional qualification to register as nurses (*All About Macao*, 2015b). MSAR has a long way to go before it achieves the secure establishment of professional institutions which will have implications for the construction of a talent database.

Local training and education have to be the core elements of talent development. Schools and education units are important for talent development in two ways. First, they provide a way to identify potential talents and help them to excel in higher-level training and education as so to advance their abilities. Second, education units provide a way to produce talent that matches the needs of the economy. Government authorities have to coordinate the various education units. In the case of Macao, the government has a limited capacity to coordinate the education sector. As described above, there is no common curriculum in primary and secondary schools, which can decide their own curricula (Liu, 2007, pp. 95-103). The government has not regulated school curricula as part of its colonial legacy. The colonial government did not provide education to the majority local Chinese. Thus, churches and social groups opened schools to educate local people based on their own curricula, and the colonial government did not regulate the teaching content. The schools, having long enjoyed autonomy in designing their curricula are reluctant to accede to government regulation, especially those schools that have Portuguese or religious curricula. Therefore, the MSAR government is relatively weak at coordinating education policies and has done nothing to reform the available curricula to identify potential talent or to provide advanced training to nurture talent.

The development of tertiary education has potential for talent development. There are ten tertiary education institutes for the 600,000 population in Macao, of which four are public and six are private (Tang, 2014, pp. 274-276)[7]. In terms of the size of tertiary education, the gross enrollment ratio (GER)[8] of Macao is relatively high. According to the MSAR's Tertiary Education Services Office, the GER for Macao's tertiary education was 61.86 percent in 2012 which is higher than those of Hong Kong, Mainland China, Japan and France (Tertiary Education Services Office, 2015, p. 13). Among the 27,776 university students in the 2012/2013 academic year, 33.6 percent were nonlocal. As for their entrepreneurial orientation, as indicated by Tang, some of Macao's tertiary institutes might not necessarily be targeting the local population and to a certain extent they have relied on the nonlocal market to boost enrollment (Tang, 2014, pp. 275-276). Coordination is needed among tertiary institutes for training local talent to develop the city's economic prospects. Although the Tertiary Education Services Office is responsible for the support of higher education in Macao, it lacks power and the authority to coordinate the programs offered by local institutes. The business sector has indicated that there might be a mismatch between the talent trained by local universities and the needs of the domestic economy. Therefore, the Talents Development Committee has included the rectors of certain local institutes, and the government has tried to coordinate the development of tertiary institutes to correspond to the talent development policy of the MSAR. The effectiveness of this effort has yet to have been proven, but the coordination with school and education units is essential for talent development and management.

As mentioned, Macao's tertiary institutes have recruited up to one-third of their students from outside Macao, as they have capacity that exceeds local demand. For instance, in the 2013/2014 academic year, 83.7 percent of high school graduates were admitted to local tertiary institutes (Education and Youth Affairs Bureau, 2015; Tertiary Education Services Office, 2015, p. 84)[9]. In addition, a large number of

Macao's high school graduates every year had left to take their tertiary education outside Macao (Tertiary Education Services Office, 2015, p. 112)[10]. It seems that most of Macao's high school graduates can receive tertiary education if they want it.

Macao's unemployment rate is very low, at 1.7 percent in 2014. The business sector complains that the supply of local talent cannot fulfill the demands of the economy. Rather than merely suggesting the importation of talent, there is a suggestion that the Macao government should allow nonlocal graduates who receive university education in Macao to work in the territory to assuage the issues created by the shortage of local talent. These nonlocal graduates are familiar with the city, as they study there. They can adapt to the local society more easily than imported talent. Some argue that as the nonlocal graduates are trained by local institutes, it is a waste of local resources to let them leave Macao after graduation.

When the Policy Research Office threw out the idea of allowing public discussion about whether nonlocal graduates could work in Macao, the labor and student groups voiced strong opposition (*Citizen Journal*, 2014). They argued that the policy would have a negative impact on the salaries and benefits of local workers and might curb the opportunities for local students. Furthermore, they argued that there had been no restriction on the admission of nonlocal students to local institutes. Although the three public tertiary institutes in Macao are restricted to recruiting no more than 15 percent of nonlocal students into their undergraduate programs, there is no such limitation at the postgraduate level. Private institutes can freely admit nonlocal students without a quota. Therefore, private institutes could in effect become a disguised channel for worker importation if nonlocal people could take job opportunities in Macao by way of receiving academic qualifications from the city's universities. It has been suggested that this may generate the phenomenon of a for-profit or corrupted college or university selling qualifications in return for access to Macao's job market. As there is no agency for program accreditation for tertiary institutes in Macao, the concern about their abuse as a means of labor importation has some validity.

Allowing nonlocal graduates to work in Macao, as a means of talent recruitment, is opposed by the local community, mainly because of the lack of a transparent institution for accrediting migrant workers and professionals. As mentioned above, there is no clear quota for the importation of labor, and the criteria for professional importation is not clear, but the authorities hold great discretion over who receives the approval to work in Macao. This has generated anxieties that any such proposal will only benefit the business sector at the cost of the interests of local labor and students.

Yet, a transparent institution of talent development is needed to balance the interests of various stakeholders in Macao's society. A scientific survey is key to the measurement and forecasting of the economy's demand for talent, of the local supply of talent, and of the amount of talent that has to be imported for sustained economic health. These issues underlie many of the matters that Macao's talent development strategy hopes to address. Without objective data and information, though, the MSAR Government will have difficulty in convincing their stakeholders to give consent for talent development.

Conclusion

Talent development for economic sustainability has been a concern in many countries and regions. The case of Macao, an emerging world-class gambling city, is no exception. Indeed, in Macao's society, talent development is a constant requirement for the sustainable development of the city. However, the question of how to develop talent

is complex and involves many stakeholders and it requires a strong government that has the capacity to collaborate with competing interests.

Generally speaking, there are three major strategies for talent development: education and training, importation, and encouraging the return of local talent living overseas. Based on the different circumstances of every country or region, a government will usually place more emphasis on one particular strategy or another. The Macao case reflects that there are prerequisites and preconditions to governments adopting these strategies. For education and training to be viable, the Macao government must have a strong capacity to coordinate the education sector to offer training programs that match socioeconomic expectations. The importation of talent is always a controversial topic that creates anxiety for local employees, since such an importation may affect their benefits in the workplace as well as their upward mobility, and hence native workers tend to oppose it.

Therefore, a transparent approval mechanism for talent importation is needed to ease local employees' opposition. Such a mechanism has to define clearly what kinds of talents and professions the society needs and the quantity of professionals that is required to fill those positions. As part of achieving this, the government must establish a professional registration regime for the definition of what constitutes the membership of professions and have metadata available to predict the amount of importation talent likely to be required in different professional fields. Employing such a mechanism should also serve the purpose of encouraging the return of overseas local talent to the territory, by giving them a clearer picture of Macao's career opportunities and better convincing them of the possibility of greater potential career development on their return. When an emerging economy undertaking a rapid rate of growth encounters a shortage of talent, the immaturity of its professional registration regime and relatively weak government capacity to act can hinder talent development.

In addition, Macao is shifting its emphasis on talent development from importation to education due to changing local circumstances. This swing in strategy reflects that talent development is no longer only a path for economic development but is also deemed a means to facilitate the upward mobility of local Macao people. Vocational training programs for local talent will have to be emphasized, and not solely as part of a government effort but as part of a campaign of public-private cooperation that should be advocated. The gaming sector has demonstrated its belief that the government's talent development policy is right in theory, by introducing in-house training programs for the promotion of local employees. More effort has to be made by the government to encourage local employers to enter different industrial sectors that can offer on-the-job training to their employees. Perhaps the government could identify some core sectors and give them aid for the in-house corporate training of local talent. The Macao government has already identified the Chinese medicine and culture and the creative industries as sectors with potential for development to diversify Macao's economy. The government should also work together with these sectors to plan strategically for local talent development.

In summary, talent development is not only encouraged for the continuation of economic growth in an emerging market but also serves the purpose of creating social stability, by giving the residents of a place the opportunity to aim at upward mobility and to fulfill their individual growth and development goals. In Macao, to be successful, it will involve reforms in its education, population, labor and immigration policies and will probably trigger opposition from the those stakeholders with vested interests in

maintaining the status quo. Macao's story suggests that an emerging market has to solve and overcome its institutional deficiencies to please its stakeholders before it can truly introduce talent development schemes and programs.

Notes

1. The Hundred Talents Program is a program devised by the Chinese Academy of Sciences that aims to attract outstanding young Chinese academics who are studying abroad. The institute recruits young Chinese scholars for research positions with three-year contracts. Chinese scholars who hold a doctoral degree with at least four consecutive years of overseas work experience who are less than 40 years old are qualified to apply. Please see the website of the Chinese Academy of Sciences, <http://employment.ustc.edu.cn/cn/indexinfo.aspx?sign=71> (accessed November 3, 2014). The Recruitment Program of Global Experts aims to recruit overseas Chinese whose expertise is compatible with national development strategies and who would like to start their businesses in China. This program is coordinated by the Central Organization Department and includes many other government departments. Please see the website of the program, www.1000plan.org (accessed November 3, 2014). This foundation aims to support the return of Chinese scholars for their research work in China. This program is administered by the State Education Ministry. Please see the program website, www.cscse.edu.cn/publish/portal0/tab86/info2769.htm (accessed November 3, 2014).
2. The 15-year free education covers a three-year kindergarten education, a six-year primary school education, and a six-year secondary school education.
3. These laws include Decree Law 12/GM/88 "The Import of Work Forces," and Decree Law 40/GM/88 "The Import of Technicians and Professional Worker."
4. The Human Resources Office was established for the approval of migrant worker applications in 2007. Before that, the Labor Affairs Bureau was responsible for the approval.
5. For example, the MGM Macao and Wynn Macao have training programs for local employees and over 80 percent of its senior management posts have been occupied by local people. Galaxy Macao launched a local leadership program in 2011 in order to identify and promote local talent to senior positions in the company. See *Citizen Journal* (2015a, b), *Macao Daily News* (2015b) and *Cheng Pao* (2015).
6. According to William Vickrey, a society is fully employed if unemployment is between one and two percent.
7. Macao had a population of about 636,200 at the end of 2014, see also Tang (2014).
8. According to the World Bank, GER refers to "the number of students enrolled at a certain level of education as a percentage of the population of the age group that officially corresponds to that level." See World Bank (2004).
9. According to the Education and Youth Affairs Bureau, there were 5,496 high school graduates in 2013. The Tertiary Education Services Office indicated that the ten local tertiary institutes admitted 4,222 and 378 local students (with 4,600 in total) to their degree and associate degree programs. See Education and Youth Affairs Bureau (2015), Tertiary Education Services Office (2015, p. 84).
10. According to the Tertiary Education Services Office, there were at least 10,717 Macao students (including those in bachelor degree and associate degree programs) receiving their tertiary education outside Macao in 2012. There may be more than 2,000 high school graduates studying abroad every year. It is noted that the figure is based on the number of applicants for tertiary education subsidy who are studying abroad. Tertiary Education Services Office (2015, p. 112).

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