A Diagrammatical Exposition of the Effects of Emiratization on Firms' Profitability in the UAE

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Abstract

The program of emiratization or partial nationalization of the labor force in the United Arab Emirates (UAE) is the source of considerable debate in the political and economic arena in the country as quotas are set by the Ministry of Labor in terms of a minimum ratio of domestic workers to foreign workers employed in some particular industries of the private sector. This paper develops a diagrammatical analysis designed to explain the problems of emiratization and shows that such a program is likely to find stiff resistance in a competitive private sector. A re-evaluation of industries subject to emiratization, as well as an immigration law which restrict the labor mobility of migrant workers in the country may play a role in helping increase the rate of native to migrant workers in the UAE.

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Immigration vs. Emiratization: Effects on Firms’ Profitability in the United Arab Emirates

Introduction

Labor migration into the United Arab Emirates (UAE) accounts for around 98% of the labor force employed in the private sector according to the National Human Resource Development and Employment Authority (TANMIA), 2004. The current guest worker system adopted by the UAE, in which workers are sponsored by local businesses before they are allowed into the country, has prevented import-competing industries from collapsing in the presence of foreign competition. Survival of these industries in the UAE would not have been possible without a supply of cheap migrant labor.

On the other hand, with the limited skills of the native population, migrant labor has, to some extent, helped the natives deal with the rigors of competition and economic fluctuations, the former, as a result of globalization, while the latter due to fluctuations of world oil prices, to which the UAE largely depends on. According to the latest numbers released by the UAE Central Bank in 2003, oil represents about 50% of GDP, and sectors like industry, manufacturing and services (including tourism), the other 50%. While the UAE economy has managed to diversify in recent years, oil still represents a large share of GDP.

It is important, however, to understand that despite the tangible benefits arising from labor immigration, preserving jobs for the native population has become a major issue now dominating the political debate in the UAE. The issue is between substitutability and complementarity of labor. If jobs for the natives are to be created either by sending actual migrant workers home, or by restricting labor immigration, the
two types of laborers (natives and migrants) must be substitutes. However, in order to preserve actual native jobs, it is also necessary to hire cheap migrant workers, a case of complementarity.

The lack of sustitability between native and migrant labor in the UAE, has prompted the authorities to develop a mechanism to increase the participation of native workers in the labor force. Such mechanism known as *emiratization*, oblige certain industries in the private sector (starting with the banking industry in 1998) to achieve a minimum ratio of native to migrant workers by a pre-determined date. Follow ups are conducted regularly to make sure these industries are reaching their *emiratization* targets according to the rules and regulation of the Ministry of Labor.

According to Ramaswani (1968), a capital abundant country is faced with two strategies; one is to send some of its capital abroad, assuming returns are higher there, or invite some foreign labor to work in the home country assuming it can be obtained at a lower foreign wage rate. He proved in a very simple way that labor immigration was preferable for increasing the country’s real national income. The UAE has followed one of Ramaswani’s suggested strategies; it has allowed a large inflow of foreign labor increasing significantly the country’s real national income over the past 30 years. Bhagwati and Srinivasan (1983) point out that if foreign workers receive the same wage as do local workers, the Ramaswani conclusion gets reversed. The implicit assumption in Bhagwati and Srinivasan is that workers’ productivity is homogeneous between foreign and domestic workers, a case, as will be explained later not matching the reality of the labor market in the UAE. Jones (2005) argues that both immigration and outsourcing may raise the real wage rate of national labor in a developed country. Jones’ argument is
important because higher real wages cannot occur with declining profits, thus any program that adversely affects the cost structure of firms (as employers in the UAE would argue it is the case with *emiratization*), could result in outsourcing in order to increase or at least prevent actual real wages from falling.

**The Migrant and Native Labor Market in the UAE: Stylized Facts**

Before moving forward, let’s discuss some of the stylized facts of the labor market in the UAE. Stylized facts come from opinions of employers and employees in different private industries operating in the country. Results of such surveys have been published in newspaper articles, as well as a recent study by TANMIA, the agency in charge of increasing the percentage of native workers in the UAE workforce. These are some the stylized facts of the labor market in the UAE:

First, migrant labor is permanent. Migrant workers come to the UAE for a limited period of time to work and save before returning home. However, new migrant workers increase or replace those leaving the country making labor immigration permanent, not temporary. Labor permits or residence visas for migrant workers are issued for periods of three years, but they are renewable and migrant workers can stay as long as they keep their jobs or until they reach 66 years of age.1

Second, it is well known that migrants hold jobs which native workers would not accept. Also migrants hold jobs that require a level of expertise which native workers do not have. In this sense, native workers are considered imperfect substitutes in the production process. It is precisely this fact what makes possible the political acceptance of labor immigration into the UAE.

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1 The rule does not apply in certain industries, like for example, education.
Third, migrant workers accept changes and variations in working conditions more readily than native workers.

Fourth, migrant labor exists in unlimited supply. An infinite supply of migrant labor means that once migrants have established contact with a potential employer in the UAE, firms in the country encounter very little problems in recruiting all the migrants willing to come. There is competition among employers of the Gulf Cooperation Council (GCC) countries for migrant workers, so wages offered for migrants to come to the UAE are higher than in their country of residence, but lower than world wages\(^2\) and the native wage rate.

Fifth, the UAE is experiencing high levels of international capital mobility.

Sixth, we assume an imperfect labor market within the UAE. Native workers are assumed to be as productive as migrant workers but native wages are higher than migrant wages. In perfectly competitive labor markets, native workers would have to compete with migrant workers, but given that they demand higher wages and benefits, employers tend to prefer migrant workers.

Seventh, because it is politically correct, employers hire native workers at the cost of profitability.

In the eyes of the government, the number of native workers hired in the private sector is too low relative to the number of migrants. As a result, a government decree known as \textit{emiratization}, forces employers to achieve a minimum ratio of native workers to migrant workers and is revolutionizing the labor market in the UAE.

\(^2\) I define the world wage rate as the wage migrant workers would earn under a hypothetical situation of perfectly labor migration across countries.
The Models

This paper develops a diagrammatical analysis to explain and understand why the *emiratization* program has not yielded significant positive results for the native labor force in the UAE. The goal of this theoretical investigation is to find the conditions under which firms in the UAE would be willing to increase the ratio of natives to foreign workers while remaining competitive. Exploring the conditions under which the idea of *emiratization* is likely to succeed, would in my view, make a contribution to this long lasting debate. The paper also proposes preliminary policy recommendations.

The models have general and specific assumptions. General assumptions are those that apply to all models. Specific assumptions are model specific. With the exception of Model 1, the general assumption is that migrant labor is internationally mobile within into the GCC, but becomes immobile once in the UAE. Native labor, on the other hand, is assumed to be internationally immobile but can move freely within the UAE. For all models, it is assumed that capital yield competitive returns. Perfect competition in the output market implies price equal cost, while in the imperfect market price is greater than cost.

The theory developed in the present paper takes into consideration most of the stylized facts discussed above. In this sense, the paper analyzes the potential impact of *emiratization* on the profitability of the competitive and non-competitive firms. The issue of a competitive UAE as the 2007 GCC free trade area approaches, versus preserving and increasing the number of jobs for native workers is discussed.

In order to understand the implications of *emiratization* in the UAE, five models are used, each one specifying its underlying assumptions. The foundation of all five
models is the Ramsey Theorem. Baumol (1977) discusses the implications of the Ramsey Theorem within the context of a break-even constraint. According to Baumol, the Ramsey Theorem can be expressed in several ways but the most widely recognized one is as follows:

“Two commodities 1 and 2 whose total cost is \( c(y_1, y_2) \), with marginal costs \( mc_1 \) and \( mc_2 \) and marginal revenues \( mr_1 \) and \( mr_2 \) must meet a budget requirement such as

\[
p_1y_1 + p_2y_2 = c(y_1, y_2)
\]  

(1)

The one form the Ramsey Theorem asserts that:

The Pareto optimal price \( p_1 \) and \( p_2 \) of two goods whose outputs are subject to a budget constraint must satisfy

\[
p_i - mc_i = \lambda (mr_i - mc_i) \quad \text{or} \quad \frac{p_1 - mc_1}{p_2 - mc_2} = \frac{mr_1 - mc_1}{mr_2 - mc_2}
\]  

(2)

That is, the optimal deviation between price and marginal cost will be proportionate to the deviation between the marginal revenue and marginal cost of that commodity.”

An extension of the Ramsey Theorem is developed in this paper and is given as:

\[
w_i - mfc_i = \lambda (mrp_i - mfc_i)
\]  

(3)

\[
\frac{w_N - mfc_N}{w_X - mfc_X} = \frac{mrp_X - mfc_X}{mrp_N - mfc_N}
\]  

(4)

where \( mfc_N \) is the marginal factor cost of native workers and \( mfc_X \) the marginal factor cost of migrant workers. \( mrp_X \) is the marginal revenue product of migrant workers while \( mrp_N \) the marginal revenue product of native workers. \( W_N \) is the wage rate of native workers while \( W_X \) is the wage rate of migrant workers.
This extension of the Ramsey Theorem implies that the optimal deviation between the wage rate and the marginal factor cost will be proportionate to the deviation between the marginal revenue product and the marginal factor cost of labor.

*Emiratization* has an important implication because for a given level of productivity, native workers demand higher wages than migrant workers, thus creating a deviation between the wage rate and the marginal revenue product. Such a distortion could cause significant changes in the cost structure of firms which in turn affect firms’ native labor demand and profitability. Let’s analyze the impact of emiratization under different scenarios:

**Model 1**

Model 1 is the simplest model of five. The model assumes that given the option and ignoring political correctness, employers will not hire native workers not even at their reservation wage ($W_{RN}$). There is a limited supply of native workers ($S_N$) willing to work at their reservation wage, and an unlimited supply of migrant workers ($S_X$) willing to come to the UAE and earn a migrant wage ($W_X$) as shown in Figure 1A. In this model perfect competition in the factor and output market is assumed, thus the migrant wage ($W_X$) is equal to the world wage rate ($W_W$).

Two factors are capital ($K$) and one type of labor, migrant labor ($L_X$). Total cost is $C (K, L_X)$. The migrants wage rate is $W_X$, and marginal revenue product of migrant labor is $mrp_X$. Since the emphasis is on the labor market and having assumed perfect competition in both the input and output market, we must meet a budget requirement such as:

$$W_X L_X = C (L_X) \quad (5)$$
From the Ramsey Theorem, the optimal wage rate, $W_X$, subject to the budget constraint must satisfy the following conditions:

$$W_X - mfc_X = mrp_X - mfc_X \quad (6)$$

So, the optimal deviation between the wage of migrant workers and the marginal factor cost will be proportionate to the deviation between the marginal revenue product and marginal factor cost of native workers. This implies an optimal hiring point where $W_X = mpr_X$ at point A in Figure 1A. Since this is a competitive industry, then, the optimal hiring point is also at $W_w = W_X = mpr_X = vmp_X$.

Satisfying the above condition as shown in Figure 1A yield a competitive returns ($\Pi = 0$) as shown in Figure 1B. Note that productivity and profitability are in the vertical axis of Figure 1B. Profitability ($\alpha$) is expressed in economic terms.

**Model 2**

In Model 2, we assume that because of political correctness, firms also hire native workers. Further, the UAE market is split into competitive and non-competitive industries in the output market. The labor market remains non-competitive. In a globalize driven economy like the one in the UAE, the number of non-competitive firms are, in general limited to those serving the domestic market and mostly for non-traded goods. For example, cab services, limousine services, construction, telecommunication, and insurance. Firms serving the international market are considered competitive in the final product. By assumption, a non-competitive labor market for migrant and domestic workers exists.

The model allows for differences in wages between the two types of workers but only a limited number of native workers are willing to work at their reservation wage.
This is shown in the horizontal portion of the native labor supply curve \((S_n)\) of Figure 2A. In other words, for a given level of productivity between native and migrant workers, native workers demand higher wages while migrant workers get lower wages.

The assumption of imperfect labor market implies the following inequalities:

\[
W_W > W_X > W_X^* \\
W_W < W_{RN} > W_X
\]

where \(W_W\) is the world wage rate, \(W_X\) is the migrant wage rate in the host country, \(W_{RN}\) the native reservation wage rate, and \(W_X^*\) is the migrant wage rate in their home country (not shown in the figures). In other words, for a given level of productivity, migrant workers in the UAE receive a wage rate below the world wage rate but above the wage rate they would get in their home countries. Conversely, native workers receive a wage rate that is above the world wage rate and above the migrant wage rate. The theoretical analysis of the costs and benefits of labor migration and *emiratization* in the UAE can also be extended to other GCC countries.

These assumptions are in line with the view of employers in the UAE. Although we have assumed similar levels of productivity between natives and migrants, this is not generally the view of employers in the UAE who view natives as being less productive than migrants. Explaining why this may be true is beyond the scope of this paper, however, lower productivity on the part of native workers could be the result of a young society with just over 30 years of independence still developing the human capital through education and training in order to compete in world markets. There is a significant amount of investment in education in the UAE likely to produce new generations of well educated and trained native workers in the long run. However, we
must recognize that while education and training bring benefits in the long run, 
emiratization is expected to yield positive short term results.

Competitive and non-competitive firms are assumed to be profit maximizers. This implies the existence of an optimal hiring point for both natives and migrant workers. The optimal hiring point would require the satisfaction of the break-even constraint of equation (3) where the firms’ total labor costs remain unchanged with the hiring of an extra native worker. Satisfying the break-even constraint is a necessary but not sufficient condition for profit maximization.

The Non-Competitive Firm

Non-competitive firms hiring behavior is different than competitive firms because they face a downward sloping demand curve. Profit maximization for non-competitive firms occurs where the wage rate equals the marginal revenue product (MRP).

In the non-competitive industries, firms obtain economic profits by hiring $L_N$ native workers and $L_X$ migrant workers, represented by points A and B of Figure 2A. Economic profits are shown at point B of Figure 2D, where $\Pi_1 > 0$. Economic profits in this model are possible because firms are keeping area 3 of Figure 2A as rents.

This is a case of an Oligopsonistic market for a resource where firms restrict employment and reduce the price of the resource (or the wage rate of migrant workers).

Oligopsonistic equilibrium involves Oligopsonistic exploitation because firms pay migrant workers a wage rate that is below their contribution to the revenue of the firm, as represented by the world wage rate. Area 3 in Figure 2A, that is the difference between $W_W$ and $W_X$ is captured by firms and is part of their economic profits. Note that the level of profits will be below normal at $\gamma = 0$ if only native workers were hired.
Firms in the non-competitive industry are prime candidates for emiratization, because they can increase the number of native workers hired from point A to the point where $S_N$ begins to slope upward (that is, by hiring all natives willing to work at their reservation wage). The result is economic profits falling to its normal level as shown in Figure 2D where at point B, $\Pi = 0$. Non-competitive firms could hire native workers only to the point where economic profits do not fall below the competitive rate or to the point where they become competitive.

Hiring more native workers requires hiring less migrant workers as represented by the distance from $L_X$ to $L_{X1}$ in Figure 2C. So, it is possible for non-competitive industries to hire native workers and achieve the ratio of native to migrant workers desired.

Whether non-competitive firms are willing to give up their non-competitive power is a different story. These industries are, in general owned by native entrepreneurs and rent-seeking from within may constitute another problem worth looking into. The fact that today these industries remain non-competitive sends a strong signal about a case of political economy yet to be discussed by the UAE authorities in charge of the emiratization program.

The Competitive Firm

The behavior of competitive firms and the decision to hire native workers is depicted in Figures 2C and 2D. Note in Figure 2C that increasing the number of native workers from zero to $L_{N1}$ requires a reduction of migrant workers from $L_X$ to $L_{X1}$. The reduction in number of migrant workers by the distance between $L_X$ and $L_{X1}$ must reduce labor costs proportionally to the increase in labor costs resulting from the hiring of native
workers. Satisfying this break-even constraint implies that productivity remains the same and firms’ economic profits is not affected by the decision to hire native workers.

Competitive firms will hire $L_{X1}$ number of migrant workers and $L_{N1}$ number of native workers as shown by points A and B of Figure 2C. The firms’ economic profits remains unchanged at $\Pi = 0$ in Figure 2D. Note also, that given the same level of productivity, if only native workers are hired, their higher wages lower firms’ economic profits below normal as shown by $\gamma < 0$. Firms’ economic profits obtained by hiring native workers only are given by $\gamma$.

In order to satisfy the break-even constraint, competitive firms must remain at its original marginal revenue curve $mpr_X$. This point occurs only at the intercept of the new marginal revenue curve $mrp_I$ and the old one $mpr$ at point A in Figure 2C.

If in Figure 2C we extend an imaginary line from point A to the vertical axis and call that the world wage rate $W_w$, the competitive firm still maximizes profits by hiring only migrant workers at that point as shown by point A in Figure 2D. It has to be true then, that the wage differential between $W_w$ and $W_X$, offsets the difference between $WRN$ and $W_w$. Labor imperfections make possible for firms to hire migrant workers at point A in Figure 2C, but pay only $W_X$. The point $M1$ in Figure 2C represents the optimal hiring point of competitive firms, hiring only $L_X$ migrant workers (zero natives) and obtaining normal profits as shown by point $M1$ in Figure 2D. This is the result obtained in Model 1.

Point A in Figure 2C represents the maximum ratio of native to migrant workers. If at that point the emiratization target has not been reached, and firms are forced to hire native workers beyond this point, the result could be firms leaving the UAE as profits fall below normal, substitute labor for capital, or outsource labor, situations explored later.
The mathematical formulation for the competitive firm in Model 2 is identical to that of Model 1 because satisfying the labor costs break-even constraint is equivalent to hiring only migrant workers $L_X$ at the wage rate $W_X$.

**Model 3**

Model 3 looks at the impact of *emiratization* in the competitive industry. The preceding model suggests that native workers are employable at their reservation wage. In Model 2 competitive firms would hire native workers up the point where total labor costs are unchanged and profits remain normal. Non-competitive firms would hire native workers but since their wage rate is higher than their marginal productivity, the extra costs of hiring them lowers profits to competitive levels. Our starting point in Model 3 is that only competitive industries exist in the output market. *Emiratization* is assumed to push firms to hire native workers at wages above the reservation wage. Given that productivity is assumed constant, then hiring native workers at a wage above the reservation wage is counter productive for firms. There is also another problem associated with *emiratization*, and that is unemployment. From principles of economics we know that wages above equilibrium which in the context of native workers is the reservation wage, increases the quantity supplied of labor while quantity demanded falls. The situation is depicted in Figure 3A.

*Emiratization* is intended to increase the share of native workers to domestic workers employed. Consequently Model 3 assumes that no more migrant workers can be hired. Keeping the number of migrant workers constant at $L_X$ while increasing the number of native workers from $L_N$ to $L_{N1}$, in Figure 3A, has a negative effect on the profitability of competitive firms.
Emiratization or increasing the number of natives hired to point A' in Figure 3A, lowers the profitability of firms below normal. Given the same number of migrant workers as shown by point B' in Figure 3B, where economic profits are $\Pi_1 < 0$. This situation explains the reluctance of competitive firms from hiring native workers beyond the point where profits are normal.

Emiratization, in other words, violates the break-even constraint of competitive firms thus resistance to the idea is likely to continue. Note that increasing the number of natives does increase the profitability of the firm to $\gamma_1$ which is far below normal profits. However, the overall effect on the firm is profits falling below normal to $\Pi_1$.

Model 4

Forcing competitive firms to hire native workers beyond point A in Figure 3A, where point A is the optimal hiring point for natives workers, can have at least three consequences the short run: one, firms could leave the UAE putting at risk existing jobs held by natives that depend on migrant workers. In other words, emiratization can put at risk the complementarity of labor. Second, firms may chose to substitute labor for capital, and third firms may outsource labor overseas. The second and third cases are explored next.

If firms chose to substitute labor for capital or to outsource, there is a reduction in the demand for total labor as represented by the leftward shift of the VMP curve in Figure 4A. The number of native workers hired is now $L_{NC2}$ and the number of migrant workers hired is at $L_{NC1}$. Assuming a high degree of sustitability between labor and capital and between labor in the UAE and abroad (outsourcing), firms can return to normal profits as represented by point C in Figure 4B.
The possible result of substitution or outsourcing, which is likely the course of action firms will take in case of \textit{emiratization}, is less number of jobs for both native and migrant workers. While it is possible to satisfy the \textit{emiratization} target, in absolute numbers, it means fewer jobs available for native workers.

Note that the shaded area between $W_W$ and $W_X$ covers the extra cost of hiring native workers represented by the shaded area between $W_{RN}$ and $W_W$. The break-even constraint is satisfied thus firms behave competitively.

\textbf{Model 5}

The question this model addresses is how to increase the ratio of native to migrant workers. The theoretical proposition presented here is that labor mobility increases the productivity of labor. However, at a later date and when data becomes available, the proposition must be empirically tested to find out its impact on the productivity of migrant workers in the UAE and GCC.

The substitution of labor for capital and outsourcing resulting from \textit{emiratization} is likely to yield undesired results for the UAE. The idea behind this model is to find an alternative to help the \textit{emiratization} program achieve some level of success.

Since native workers already receive a wage rate above their marginal productivity of labor, we can safely assume that they have little to no incentive to be more productive. Thus, we must concentrate on how to make the migrant workers more productive. We still assume that for a given level of productivity, migrant workers are paid less than their marginal productivity of labor as represented by the world wage ($W_W$). Conversely, for a given level of productivity, native workers are hired at a premium as represented by their reservation wage ($W_{RN}$). Recall that we have assumed
that *emiratization* pushes firms to hire native workers above their reservation wage as given by $W_N$ in the upper slopping portion of $S_N$ in Figure 5A.

Given appropriate incentives, migrant workers could be able to increase their productivity; the question is how to make migrant workers more productive in the short-run? One way is by allowing more labor mobility. Current immigration laws in the UAE allow migrant workers to work only for his/her visa sponsor. Changing jobs, for most labor categories, including college professors requires workers to leave the country for a period of no less than 6 months; this increases the cost of changing jobs significantly.

If migrant workers are allowed to change jobs without so many restrictions, based on the proposition that of labor mobility increases productivity, migrant workers may become more productive as they search for higher paying jobs. Under present conditions, employers know that migrant workers are restricted from changing jobs. Thus there is no incentive on their part to pay higher wages. On the other hand, migrant workers have no incentives to train themselves to achieve higher levels of productivity as well.

Relaxing this immigration and labor law will benefit the native workers as they become relatively cheaper than migrant workers. It will also benefit employers, because despite the fact that migrant workers will require higher wages for higher productivity, this does not imply that migrant workers will get paid their marginal productivity. They could be better rewarded, but in the short run migrant wages would still fall short of marginal productivity as given by the world wage, $W_w$.

The impact of labor mobility is depicted in Figure 5A where the number of native workers hired increased from point A to point C in the upper sloping portion of the supply of native workers, $S_N$, and the number of migrant workers decrease from point B.
to point C’. Migrant workers receive a wage rate ($W_{X1}$) below the world wage rate ($W_w$) which represents migrant workers marginal productivity of labor. Note that $W_{X1}$ is greater than $W_X$ as migrant workers at this point have achieved higher levels of productivity.

With *emiratization*, firms’ profitability fell to point C, where profits are below zero ($\Pi_2 < 0$). The increase in migrant workers’ productivity resulting from more labor mobility must offset the extra labor costs resulting from increasing the number of native workers from $L_{NC}$ to $L_{NC1}$ in Figure 5A. The extra productivity of migrant workers at point $L_{NC1}$ in Figure 5B is represented by an upward kink in the profitability function taking profits no its normal level at $\Pi = 0$ at point C’ in Figure 5B.

**Separating Equilibriums**

Migrant workers are assumed to have a level of education $E_X$, associated with a level of productivity $\lambda_X$. Model 4 showed that increasing the number of native workers above their reservation wage lowers the profitability of the firm from $\Pi = 0$ to $\Pi_1 < 0$ in Figure 4B. The reason is that for the same level of productivity, we are hiring more native workers given by the distance between $L_{NC1}$ and $L_{XC1}$ in Figure 4A at a wage rate of $W_N$, above the reservation wage of $W_{RN}$. Also, less migrant workers are hired as given by the distance between $L_{XC}$ and $L_{NC1}$ in Figure 4A.

To make up for this loss of profitability, firms can substitute labor for capital or outsource labor abroad as discussed in Model 5. We could, however, consider a third option that could get firms both a larger share of native to migrant workers while profitability remaining normal. This could be achieved by increasing the productivity of migrant workers.
Let’s assume that migrant workers have a level of education $E_X = 0$, associated with a level of productivity $\lambda_X$. Let’s assume further that that higher level of productivity $\lambda_W$ can be acquired by increasing the level of education to $E_X^*$ such that $E_X = E_X^*$. For simplicity, the productivity level $\lambda_W$ represents also workers’ world productivity and is associated with a world wage rate of $W_W$. With labor mobility, migrant workers will be prepared to spend some resources in trying to convince prospective employers that they can achieve even higher levels of productivity. The way to do this is to acquire more education, $E_X$, which serves as a signal of productivity. Education is assumed to be more costly for native workers than for migrant workers. The lack of motivation on the part of native workers (perhaps the result of the already existing high wages for them) makes the cost of acquiring education for natives harder than for migrants. Thus we assume that native workers find studying harder and more tedious than migrant workers and take longer to complete their courses.

Education can be either $E_X = 0$ or $E_X = E_X^*$. If migrant workers chose $E_X = 0$, theirs productivity is $\lambda_X$ and his wage rate is $W_X$. If migrant workers chose $E_X = E_X^*$ their productivity is $\lambda_W$ and his wage rate is $W_{X1}$. If at $\lambda_W$ the wage rate is $W_X$, then migrant workers chose a level of education $E_X = 0$. This is because education is costly and the workers are not being compensated for it. The cost of education for migrants is given by $C_X$, where the total cost of acquiring education $E_X^*$ is $C_X E_X (E_X^* = C_X E_X)$.

Since we have assumed an imperfect labor market, with a level of productivity $\lambda_W$, migrant workers get paid $W_{X1}$ rather than $W_W$, where $W_W > W_{X1} > W_X$. Migrant workers would benefit if:

$$C_X E_X \leq W_{X1} - W_X$$

(7)
That is, the wage differential is at least equal to the cost of acquiring extra education.

Given that

$$W_W - W_X = W_{X1} \quad (8)$$

Then,

$$\lambda \ W = E_X^* = W_{X1} \quad (9)$$

or

$$\lambda \ W - E_X^* \leq W_W \quad (10)$$

Employers benefit as well because they have more productive workers earning a wage rate below the workers’ marginal productivity of labor as represented by the world wage rate $W_W$. The employers remain competitive because he is not keeping the difference between $W_W - W_{X1}$ as part of its rents, but using them to cover the extra costs of hiring more native workers. The shaded area $L_{NC1}, L_{XC1}, W_W, W_{X1}$ is what the employers use to cover the area between the origin, $L_{NC1}, W_N, W_{RN}$ of Figure 5A.

Native workers can also chose to have a level of education $E_N = 0$ or $E_N = E_N^*$. It is assumed that native workers have a level of education $E_N$, but have no incentive to acquire a level of education $E_N^*$ since they already receive a wage rate $W_{RN}$ that exceeds their marginal productivity $\lambda_N$. On the other hand, since it was also assumed that it is more costly for natives to acquire education, then given the cost of education for natives $C_N$, and the total cost of education as $C_NE_N$, then, $C_NE_N > W_{RN}$, thus natives will select $E_N = 0$. For those native workers hired in the upper level portion of the supply curve $S_N$ in Figure 5A, the incentives are even less, since $W_N > W_{RN}$. In other words, there is less incentive for native workers hired under emiratization to be productive, relative to those
native workers hired by the private sector at their reservation wage. In both cases, however, no incentives exist for native workers to increase their productivity by acquiring higher levels of education.

All these mean no change in education vis-à-vis productivity for native workers. To avoid violating the break-even constraint as imposed by the Ramsey Theorem, the difference between $\lambda_W - W_{XI}$ must offset the difference between $\lambda_N - W_N$ and $\lambda_N - W_{RN}$. If migrant workers acquire this level of productivity through the appropriate incentives, the *emiratization* process is likely to see some positive results in the medium run.

**Conclusion**

This paper attempts to explain the potential impact of *emiratization* on the profitability of firms in the UAE thus the reasons behind the stiff resistance to *emiratization* on the part of the private sector. Profit maximization implies cost minimization, thus given similar level of productivity between migrant and native workers; competitive firms will hire the cheaper of the two.

The impact of *emiratization* on the profitability of competitive firms is significant because it could bring economic profits to levels below normal, thus forcing firms to adopt different policies to survive if they wish to remain in the market. One policy firms can adopt is the substitution of labor for capital, under which the *emiratization* target could be reached, but in absolute numbers, it means fewer jobs for native workers. Second, firms can recur to outsourcing which reduces the need for native and migrant labor in the country, and while it is possible to reach the *emiratization* target, the number of jobs available to natives could be fewer than expected.
One problem with the idea of emiratization is that it is being applied to different industries without a real understanding of the market structure in which they operate. This paper has introduced two markets; a competitive output market with a non-competitive labor market, and a non-competitive output market with non-competitive labor market.

In the case of a competitive output market with a non-competitive labor market, emiratization is not possible. In this market, firms are hiring native workers at their reservation wage which is above their marginal productivity as represented by the world wage rate. On the other hand, firms are paying migrant workers a wage rate that is below their marginal productivity, as represented by the world wage rate. Firms still remain competitive because the two differences offset each other and there is no room for hiring more natives.

In the case of non-competitive output market and non-competitive labor market emiratization is possible. Non-competitive firms in the output market in the UAE are mostly those serving the domestic market, such as telecommunication, construction, cab services, limousines services, education, insurance, etc. These firms do have a room for hiring more natives, but only to the point where their profits become normal. In other words, actual rents can be used to finance the hiring of native workers.

This provides an interesting result because non-competitive firms are somehow protected or benefit from some level of protection on the part of the government. Also, given actual laws, majority ownership of these firms is held by UAE nationals. Thus, ultimately, the question becomes are UAE nationals willing to give up their economic rents in exchange for providing more jobs to their nationals? This becomes a political
decision more than an economic one, but there is no doubt that non-competitive firms in the output market are the prime candidates for emiratization.

From the international perspective, the issue of labor migration and emiratization must be resolved and coordinated with other GCC countries before 2007, the year when a common market among GCC countries is expected to be fully implemented. From factor proportions trade theory we know that countries tend to export goods that uses their abundance factors intensively. If labor intensity and abundance are useful predictors of trade patterns, then it is not to the UAE advantage to pursue emiratization, if other GCC countries, which also rely heavily on migrant workers, do not follow similar policy. Given similar factor endowments between the UAE and other GCC countries, it is possible to argue that an emiratization policy not matched by similar policy in other GCC countries will eventually make the UAE less competitive in a GCC free trade area.

There are at least two reasons for such an assessment: first, migrant labor is significantly cheaper than native labor and, other things equal, emiratization can adversely alter the cost structure of certain UAE industries. Second, if certain UAE industries are required by law to absorb costs their international competitors do not bear, they are unlikely to survive in the long run.

Even if such policy is taken as a bloc, the question becomes whether the UAE and GCC will be able to compete in world markets.

Finally, the paper recommends labor mobility as a potential solution to help achieve a higher ratio of native to migrant workers in the country. To increase the mobility of labor of migrant workers, immigration laws should be re-evaluated. Currently, migrant workers are not allowed to change jobs without the approval of their
current employer or visa sponsor. This practice has led to abuses on the part of the employer as they, at their own discretion, have been accused of simply harming workers by not allowing them to change jobs. This practice, has a negative effect on any incentive migrant workers may have to educate themselves further to be more productive workers.

As migrant workers become more productive and their wages rise, native workers become relatively less expensive. The benefit from labor mobility is not just limited to increase in productivity, but also its relative effect between native wages and migrant wages is important and could eventually help to increase the number of native workers in industries operating across the UAE.
References


Figure 1A

Figure 1B
Figure 2A

Figure 2B

Profitability, $\pi$

$\gamma < 0$

$\gamma = 0$

$\pi$
Figure 2C

Figure 2D

Profitability, $\pi$

$\gamma_1 < 0$

$\gamma_1 > 0$

$\pi_1$

$\pi_1 > 0$

$\pi_1 < 0$

Native Workers

Migrant Workers

Native Workers

Migrant Workers

$\gamma_1$

$\pi_1$

$L_N$

$L_X$

$W_{RN}$

$W_W$

$W_X$

$S_N$

$S_X$

MRP
Figure 3A

Figure 3B

Profitability, $\pi$

$\gamma$ $\gamma_1$ $\pi$ $\pi_1$

$\pi = 0$ $\pi_1 < 0$ $\gamma_1 < 0$ $\gamma < 0$

Native Workers Migrant Workers

Unemployment of Native Emiratization

$VMP = MRP$

$WW = WX$
Figure 4A

Figure 4B

Profitability, $\pi$

$\pi, \gamma_1, \gamma$ $\gamma_2$

$\pi_1 < 0, \gamma < 0, \gamma_2 < 0$

$\pi = 0$

Native Workers $\rightarrow$ Migrant Workers

$W$ $L$

$W_N, W_{RN}, W_W, W_X$

$S_N, S_X$

$L_{NC2}, L_{NC}, L_{NC1}, L_{XC}, L_{XC1}$

Unemployment of Native

Emiratization

VMP = MRP

VMP$_1$ = MRP$_1$
Profitability, $\pi$

$\gamma_1 < 0$

$\gamma < 0$

$\pi = 0$

Figure 5B

Figure 5A