





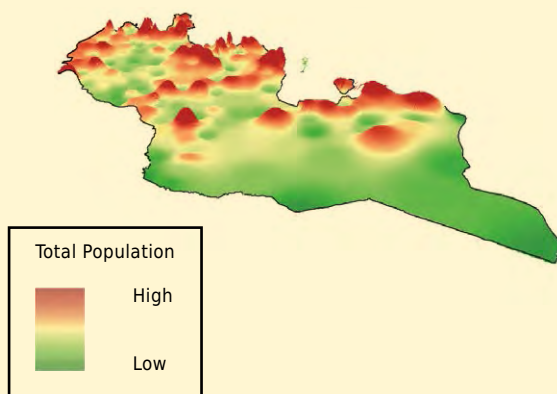
The solution is not the provision of fiscal and financial incentives; rather it is essential to improve the quality of life, access to basic services, and connectivity of interior regions



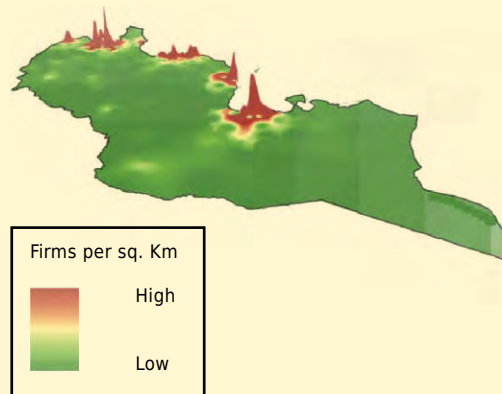
**R**egional disparities are of concern to policy makers around the world, and Tunisia is no exception. Approximately 56 percent of the population and 92 percent of all industrial firms in Tunisia are located within an hour's drive of Tunisia's three largest cities, Tunis (the capital), Sfax, and Sousse. These three coastal cities are the centers of economic activity, accounting for 85 percent of the country's GDP (figure 10.1 and figure 10.2)<sup>2</sup>. Similarly, in spite of generous fiscal and financial incentives, foreign firms established in the poorer "regional development zones" account for less than 13 percent of the total foreign firms in Tunisia and for 16 percent of jobs created by them. As a result, policy makers in Tunisia are concerned about the lack of economic opportunities in lagging areas (Ministry of Regional Development of Tunisia 2011)<sup>3</sup>.

Concentration of economic activity and population is not unique to Tunisia, however. Half the world's production occurs on 1.5 percent of its land. In Japan, Tokyo has four percent of the country's land area but generates 40 percent of its output. In France, Paris has only two percent of the land but accounts for 30 percent of the country's output (Kochendorfer-Lucius and Pleskovic 2009). Despite concentration of economic activity, however, these countries have seen convergence in access to basic services: unbalanced growth has been accompanied by inclusive development. When development is inclusive and living standards converge, the benefits from growth are shared beyond regional boundaries (World Bank 2014g). This is not the case in Tunisia where income disparities remain significant across regions. As discussed in this chapter, the benefits of economic growth have not spilled over to the hinterlands and inner regions and did not lead to improved opportunities in disadvantaged areas. The challenge for Tunisia, therefore, is to ensure that living standards can converge.

**Figure 10.1:** Density of Population per Square Kilometer in Tunisia, 2012

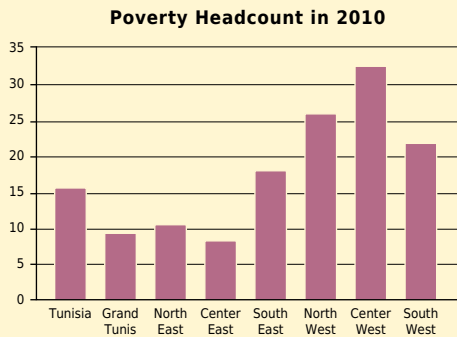


**Figure 10.2:** Firm Density per Square Kilometer in Tunisia, 2012



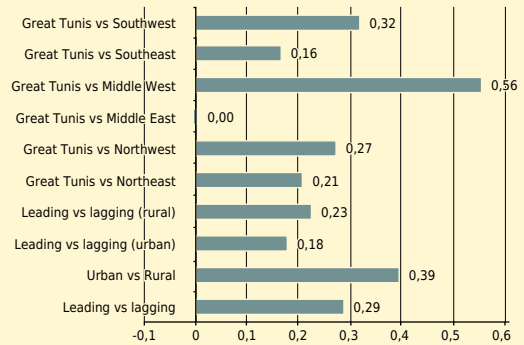
Source: Tunisia Urbanization Review, World Bank 2014g (based on INS population data for 2011 and industrial firm data for 2011 compiled from the Commissariat Général au Développement Régional, Office de Développement du Nord-Ouest, Office de Développement du Centre Ouest, and Office de Développement du Sud).

**Figure 10.3: Poverty Rate by Region in 2010**  
(Percent of Population below the Poverty Line)



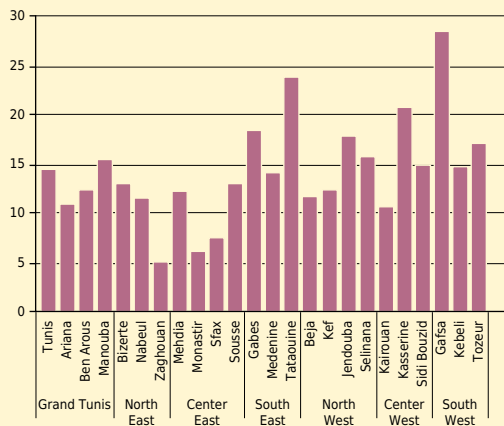
Source: INS, AFDB and World Bank (2012).

**Figure 10.4: Welfare Gap between Regions in 2005**  
(Consumption Gap as a Percent)



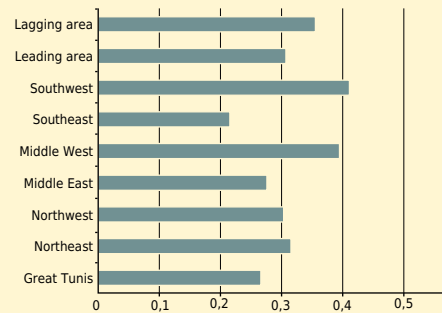
Source: Calculations based on INS 2005 household survey

**Figure 10.5: Unemployment Rates by Province and Region in 2010**  
(Percent)



Source: Calculations based on INS 2013 Labor Force Survey.

**Figure 10.6: Welfare Gap within Regions in 2005**  
(Urban vs. Rural Areas)



Source: Calculations based on INS 2005 household survey

As discussed in previous chapters, regional disparities in Tunisia have paradoxically been exacerbated by economic policies. Industrial policy, and specifically the Investment Incentives Code, labor market regulations, and agricultural policy have all contributed to deepen, rather than mitigate, regional imbalances<sup>4</sup>. Removing those distortions and rigidities is a prerequisite to achieve a more balanced economic development. It is these nationwide policy changes that will have the greatest impact in terms of reducing regional disparities.

In addition, this chapter explores the scope for additional policy actions available to the authorities for attacking regional disparities. It highlights the tradeoff between equity and efficiency, and the inefficacy of seeking to reduce regional disparities via providing fiscal and financial incentives. It argues instead for a policy that focuses on improving living conditions across the country to ensure quality of basic services (such as health, education, and transport), access to good infrastructure (such as transport and telecommunications), and more generally quality

of life (including cultural events and recreational amenities). It also highlights that improving connectivity, to enable people to move to jobs as well as to lower costs for investors, is critical and goes well beyond investments in infrastructure—in fact market failures call for an active role of the government.

## **10.1 / Regional Disparities in Tunisia**

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**D**espite success on many fronts, Tunisia still faces persistent regional disparities in living standards between rural and urban areas and between leading and lagging regions. Glaring regional disparities persist, with poverty estimates in 2010 ranging from a low rate of eight to nine percent in the Center East region and Greater Tunis to a high of 26 and 32 percent in the North West and Center West regions respectively (figure 10.3)<sup>5</sup>. Such wide variations in poverty rates reflect very large average consumption differentials, across regions and within regions as well (figure 10.4 and figure 10.5; see also Ayadi and Amara 2008). In 2005 the consumption gap between urban areas and rural areas within each region was at least 20 percent, and reached approximately 40 percent in the Center West and South West. Across regions the urban-rural consumption gap was 39 percent on average. Similarly, the average consumption gap between leading areas (mainly along the coast) and lagging areas (mainly in the interior) was approximately 29 percent on average, but reached 56 percent between the center west and the Greater Tunis and Center East regions (Figure 10.4).

Similarly, unemployment rates show considerable disparities across regions, and are especially high in the interior rural regions. Unemployment is concentrated geographically in the North West (at 20.3 percent as of mid-2013), the Center West (at 15.6 percent), and the interior South of the country (at 23.5 percent). Levels of unemployment are lower along the northeast coastal areas (at 12.5 percent). The highest unemployment rates (20 to 22 percent) are in interior areas (the governorates of Le Kef, Jendouba, Kasserine, and Gafsa), compared with seven to 11 percent in the coastal areas (the governorates of Nabeul, Sousse, Mounastir, and Sfax) (figure 10.5). A recent survey of Tunisian households living in peri-urban areas (World Bank 2013b) suggests employment outcomes in urban areas also vary considerably across regions. While coastal areas have an unemployment rate of 12 percent, unemployment reaches 16 percent in the interior urban areas<sup>6</sup>. In recent years the increase in unemployment has affected predominantly regions with already high levels of unemployment. In fact, unemployment has actually grown faster in interior governorates while decreasing in coastal ones.

## **10.2 / What Explains Such Large Intraregional and Interregional Variations in Income and Employment Levels?**

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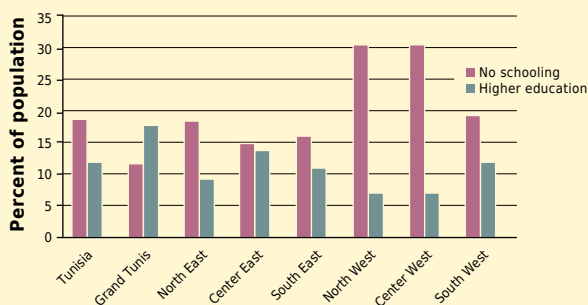
### ***Differences in Access to Basic Services and Human Capital***

**A**ccess to basic services has improved significantly, but differences between leading and lagging areas persist, especially in rural areas. Access to electricity in urban and rural areas has converged, with near universal coverage throughout Tunisia. For other basic services, however, a significant gap remains in lagging regions and rural areas. Urban areas have close to universal coverage of basic services in all regions, but rural areas still lag behind. Access to the water network has also improved substantially over the past 25 years. While 97 percent of households in Greater Tunis in 2005 had piped water in their dwelling as their main water source, only 61 percent of households in the North West and Center West did, and only 40 percent of

rural households in the North West, did. Similarly, more than 90 percent of households had a toilet in their dwelling in Greater Tunis and the South West, but only 66 percent of households in the Center West did. And, while by 2004 almost 93 percent of homes in Tunis were connected to a public sanitation network, only 12 percent enjoyed the same in Sidi Bouzid (in the Center West). Overall, nearly 25 percent of Tunisian households lack connections to a public sanitation network.

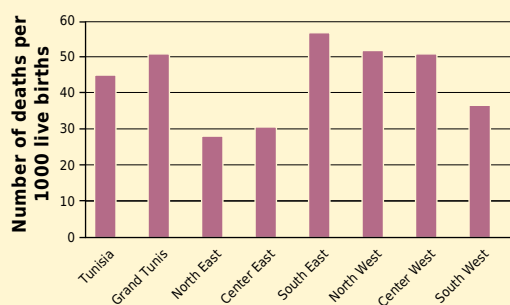
Despite the large progress for both men and women, regional disparities persist in access to education in rural areas, with the North West and Center West lagging behind other regions. Close to 80 percent of household heads in Greater Tunis and the Center East have some form of education, compared to less than half in the North West. This gap has been almost eliminated for the younger generations, reflecting the success of government efforts to reduce disparities in education. The 2004 census showed that enrollment in primary education is largely consistent with the distribution of children ages 6–14. This improvement in educational attainment likely stems from expanded physical access to schools across Tunisia. As expected, spatial inequalities persist in the distribution of the population ages 19–24 enrolled in higher education, with people living in localities (*délégations*) within one hour of a major city accounting for 74 percent of enrollment in higher education (despite accounting for only 62 percent of the population) (figure 10.7).

**Figure 10.7:** Education Level of the Population by Region in 2011



Source: INS, Labor Force Survey 2011

**Figure 10.8:** Maternal Mortality by Region in 2008

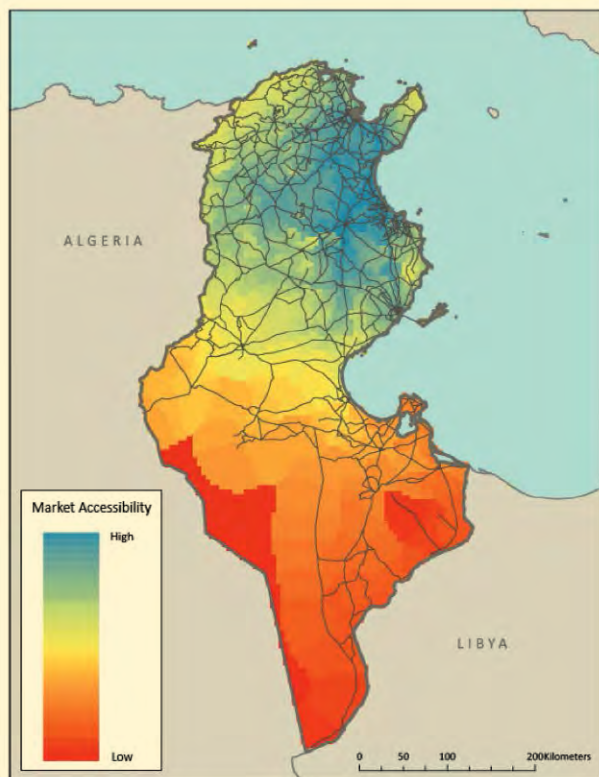


Source: Ministry of Health, National Maternal Mortality Survey Report 2010

Access to health care is also concentrated near large cities. Access to health services is now uniformly good in urban areas, but significant barriers to access exist in remote lagging areas (as shown by maternal mortality rates in figure 10.8). Some 77 percent of the country’s public basic health care centers are in localities (*délégations*) within an hour of a large city; less than one percent are in localities that are more than two hours from a large city, even though such localities account for nearly 20 percent of the country’s population. The perception of the quality of services is also lagging behind in interior regions. Youth (aged 15 to 29) perception of the quality of health services available in the neighborhood where they reside is more negative in the interior than in the coast, especially in the South West and the Center West (World Bank, 2013b). In line with these differences, although aggregate health indicators improved across most of the country, progress has been limited in remote rural regions. In 2010 children in rural areas are more than twice as likely to be stunted (10 percent in rural areas versus four percent in urban); fewer women get prenatal services or treatment for high-risk pregnancies; and maternal mortality rates are three times higher (70 versus 20 deaths per 100,000 live births).



**Figure 10.9:** Market Accessibility across Tunisia



Source: World Bank 2014g

Overall, differences in access to basic services and human capital endowments persist, notably between leading and lagging areas, and could be a key driver of spatial disparities in labor market outcomes. Physical access to education and health facilities and access to basic amenities and services appear to be fairly uniform across urban areas of the country, but significant gaps persist in lagging rural areas. Observed variations in labor market outcomes across Tunisia could potentially be due to the differences in human capital; however, it seems likely these differences may explain only part of the variation in incomes in remote rural areas, since as discussed below these areas are also hampered by lower connectivity and access to markets.

#### ***Differences in Transport Infrastructure and Access to Markets***

Market accessibility appears to be good for most of the northern and center parts of the country and quickly decreases for the southern areas<sup>7</sup>. Tunisia is a small country, such that half of Tunisian localities are within one hour's travel time of a city with more than 100,000 inhabitants—these localities are home to 62 percent of the country's total population and 71 percent of the urban population. We calculated a "heat map" that accounts for both the actual extent of the road network and the location of population to provide a measure of market accessibility (World Bank 2008e; World Bank 2014g)<sup>8</sup>. Market

accessibility is a more informative measure than simple distance using straight lines as it considers not only the time traveled between different points in the country through the transport network but also the population living in the different areas. Using data on population at the level of localities for 2010 and on Tunisia's road network, we calculated an accessibility measure for every point in Tunisia (figure 10.9; for details of the methodology, see World Bank 2014g).

As expected, the south, and in particular the South West, seem to be the most "remote" areas of the country. Most of the country seems to be relatively well connected in terms of travel time through the road network to Tunis, Sfax, and Sousse<sup>9</sup>. The South West region, however, is relatively disconnected from the rest of the country<sup>10</sup>. Remoteness is a relative concept in this analysis; and, with Tunisia's being a small country, physical connectivity does not appear to be a binding constraint for overall connectivity. Figure 10.8 suggests that the longest trip from Tunis, Sfax, or Sousse would still only be less than 10 hours.<sup>11</sup>

#### ***Why are Firms and Employment Opportunities Clustered Along the Coast?***

Private sector activity is heavily concentrated along the coast, reflecting the natural geographic advantages and the need to connect to international markets, which have been reinforced by the impact of distortive economic policies. As mentioned, firms and jobs are concentrated at the coast (see also

Amara and Ayadi 2011). In particular almost all industrial firms are located close to the three coastal cities of Tunis, Sfax, and Sousse; and 56 percent of the population lives in the same area (figure 10.2; World Bank 2014g). Firm size is also larger in the coastal regions than in the interior regions. To a large extent such concentration of economic activity and people along coastal areas and in urban centers is natural given the many benefits to trade, access to markets, and availability of a set of essential services. Indeed we observe similar patterns all over the world (World Bank 2008e). As discussed in Chapter Four, however, these natural patterns of spatial location have been exacerbated by the focus of industrial policy (notably through the Investment Incentives Code) on export promotion—which has further incentivized firms to establish close to the export infrastructure, along the coast. In addition, as also discussed in Chapter Four, firms perceive the business environment as being better in Tunis than in the rest of the country (World Bank 2014e).

This spatial clustering of firms implies that the availability of jobs is also regionally skewed. Because firms tend to mass around large population centers at the coast, dense population pockets in the interior do not have a significant private sector presence (figure 10.2). Private firms tend to be very small in Tunisia, and the few large firms tend to be offshore firms located in the coastal regions (Chapter One). In the Center West, 94 percent of private firms are one-person firms (that is, self-employed) while this proportion is down to 83 percent in the Center East. The resulting widespread lack of job opportunities, especially in the interior, is confirmed by perception survey data: 83 percent of respondents, against 73 percent in the coast (World Bank 2013b).

### **What Explains Such Large Intra-regional and Inter-regional Variations in Income and Employment Levels?**

The main driver of the consumption gap between rural and urban areas within the same region is differences in household characteristics. Differences in consumption within and across regions can be decomposed using the Oaxaca-Blinder decomposition approach, which is useful in examining whether the differences stem primarily from differences in household characteristics or differences in the returns to those characteristics (box 10.1). The results from this approach have major implications for deciding how to invest to reduce the welfare gap. For rural-urban differences within the same region in all cases (except the South West—discussed below), the consumption gap is driven by differences in household characteristics (that is, endowments; figure 10.10). These results are important in light of the disparities highlighted above—they suggest that rural-urban differences are driven by those disparities.

#### **Box 10.1: The Oaxaca-Blinder Decomposition: Endowments or Markets?**

The Oaxaca-Blinder decomposition can be used to estimate welfare differences across regions and understand their main components. As a first step we estimate the log of the welfare ratios as a function of household characteristics (education, access to basic services, and the like):

$$y_j = X_j \beta_j + \varepsilon_j$$

where  $j$  are regions,  $X$  is a vector of household characteristics, and  $\beta$  are the relevant parameters.

Then, we use the O-B decomposition to estimate welfare gap and obtain its components, by carrying out a decomposition of the welfare identifies characteristics versus the returns effects:

$$y_A - y_B = X_A \beta_A - X_B \beta_B$$

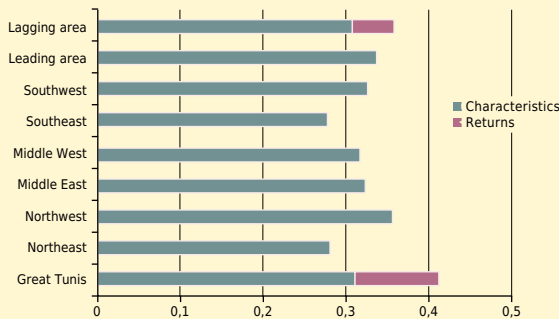
$$y_A - y_B = (X_A - X_B) \beta_A + (\beta_A - \beta_B) X_A$$

The results allow us to separate the differences in welfare associated with differences in characteristics, from the unexplained amounts we can attribute to differences in returns, due to differences in the operation of markets at the local level (for example, due to limited connectivity and/or other market failures).

*Source: Blinder (1973); Oaxaca (1973).*

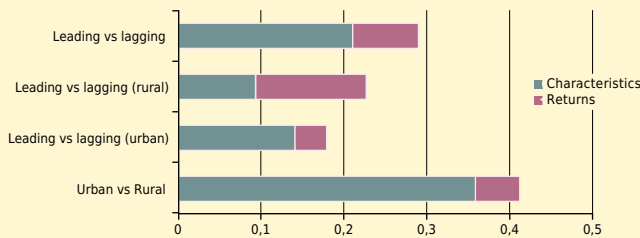


**Figure 10.10:** Oaxaca-Blinder Decomposition between Rural and Urban Areas within Each Region



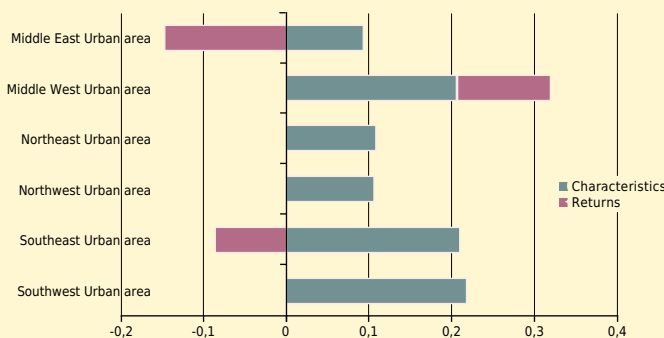
Source: Calculations based on INS 2005 household survey

**Figure 10.11:** Oaxaca-Blinder Decomposition between Leading and Lagging Areas (and Rural vs Urban Areas)



Source: Calculations based on INS 2005 household survey

**Figure 10.12:** Oaxaca-Blinder Decomposition across Urban Areas (Compared to Greater Tunis)



Source: Calculations based on INS 2005 household survey

For the South West differences in characteristics still dominate, but the difference in returns to characteristics is also important. The analysis suggests that, if households in rural areas in the southwest had characteristics (education, access to services, and the like) similar to those in households in urban areas, the consumption gap between rural and urban areas would decrease by almost three quarters. There are also issues with mobility, as indicated by the difference in returns—which resonates with the observation above that the South West is particularly worse off in terms of connectivity (figure 10.9). Returns to household characteristics are lower in rural areas in the South West, accounting for almost 25 percent of the total gap between rural and urban areas in that region.

Over 80 percent of the consumption gap between urban areas in lagging and leading regions appears due to differences in household characteristics; however, differences in returns are most important when looking at differences between rural areas in lagging and leading regions, accounting for almost 60 percent of the gap. The total gap is considerably larger between rural areas (22 percent) compared to the gap between urban areas (18 percent).

The composition of the gaps is also very different: for urban areas, the dominant effect is the characteristics effect while differences in returns dominate between rural areas (Figure 10.11). For differences between urban areas in leading and lagging regions the main component of the consumption gap is the differences in household characteristics for all regions except the Center East, where returns to characteristics are higher than in Greater Tunis (Figure 10.12). If urban household characteristics in the Center West urban areas were similar to those in Greater Tunis, the consumption gap would decrease by almost two thirds, from a welfare gap of 32 percent to a gap of around 11 percent.

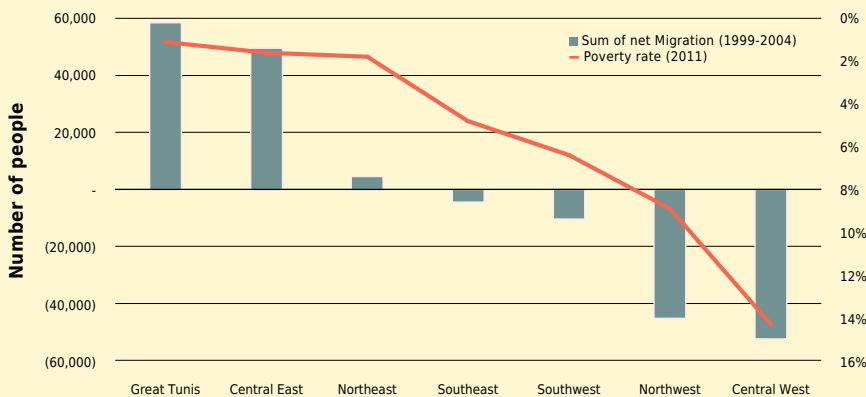
### 10.3 / Boosting Endowments and Enabling Returns in Lagging Areas: A Clear Role for the Government

These results appear to reflect the existence of disparities in the demand for labor, physical access to jobs, and access to information and networks. Spatial disparities in employment outcomes in Tunisia appear to be mainly due to the lack of private sector job opportunities. As discussed in Chapter One, the record of the Tunisian private sector as a creator of jobs has not been satisfactory; and private sector does not exhibit signs of dynamism and creative destruction (Chapter One). The policy levers to bridge these spatial disparities can be either through taking jobs to people or through bringing people closer to jobs. In the first case, as discussed above, there are significant economic and strategic advantages in the coastal areas of Tunisia that have led to a concentration of labor demand in these areas. From the efficiency perspective, the current pattern of firm location is in line with exploiting these advantages and reaping agglomeration economies. Over and above boosting the employment generation capacity of Tunisia’s coastal private sector, the policy challenge is to better connect people with jobs. The two primary levers for the latter are improved transportation and migration (box 10.2).

#### Box 10.2: The Search for Jobs: Internal Migration in Tunisia

Internal migration flows indicate that people are moving from high-poverty to low-poverty regions in search of opportunity. Proximity to centers of job creation can, however, be bridged either by improving connectivity through transportation and communication or by facilitating the movement of people toward jobs. In contrast to the relatively uniform access to education and health services, access to public transportation is much lower in the interior regions. Thus, the higher unemployment rates in the interior regions may be because job seekers find it more difficult to bridge the physical gap between home and work. While 87 percent of urban households in Tunis live within a 15-minute walk to the nearest bus station, in the North West and Center West respectively, this proportion falls to 54 and 65 percent respectively. Taking the interior as a whole, two-thirds of households have access based on this measure whereas four-fifths of households in the coast are close to bus services (World Bank 2013b).

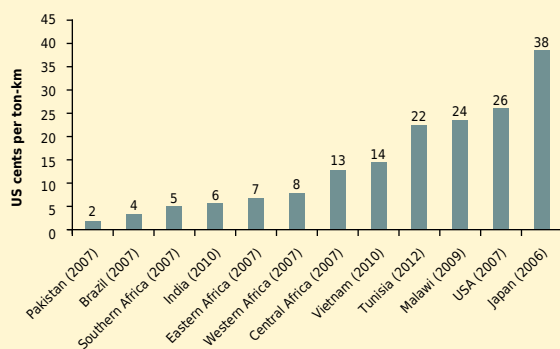
Figure B10.2.1: Tunisia’s Net Internal Migration, 1994-2004



Source: Tunisia Urbanization Review, World Bank 2014g

An efficiently functioning transportation system can support and further enhance the benefits of agglomeration economies. It is also a key determinant of a country's economic geography. The design, functioning, and development of a transportation system can determine where economic activity will grow and thrive. Transport connectivity is an important tool at the hands of planners and policy makers for accelerating growth. But the decisions of where to invest will have implications for both efficiency and equity and therefore have to be analyzed with care. Identifying where the key bottlenecks lie is essential to identifying the key options for improving connectivity and understanding the tradeoffs that such improvement may bring.

**Figure 10.13:** International Truck-Freight prices, in US cents per ton-km



Source: World Bank 2014g.

In Tunisia, while physical distances are small, economic distances appear to be large (World Bank 2014g). While Tunisia has a good transport infrastructure network such that travel times are relatively small, nevertheless “economic distances” (internal transportation costs) are very high. Average truck freight prices in Tunisia are US\$0.22 per ton km, only two cents lower than the average prices in the United States, a country with more than 10 times the GDP per capita of Tunisia (figure 10.13)<sup>12</sup>. The average price of truck freight in Tunisia is much higher than in other developing countries such as India (US\$0.06) and Vietnam (US\$0.14). It is also substantially higher compared to average freight prices in Sub-Saharan Africa (US\$0.05 to US\$0.13) (Teravaninthorn and Raballand 2009)<sup>13</sup>.

Tunisia's national average price-cost gap of truck freight is large at 44 percent and persists despite a very fragmented industry. There is a large variation in the estimated price-cost gap across city and movement types. The price-cost gaps for cities not connected to highways and national routes are high and above 48 percent, irrespective of the distance travelled. Today large price-cost gaps exist for medium—and long-distance freight trucking trips as well as for short trips from cities that are not connected to the national highway system. Variations in the price-cost gap across city types suggest that the level of competition varies across routes, with narrower price-cost gaps for short trips around large (–1 percent) and connected cities (10 percent) and wider gaps for longer trips (above 55 percent for all routes) and even short trips for non-connected cities (48 percent). A key question is whether these price-cost differences are, at least in part, a result of a monopolistic or cartelized market structure as is the case for several countries in Sub-Saharan Africa (Teravaninthorn and Raballand 2009)<sup>14</sup>. This does not appear to be generally the case in Tunisia, since following deregulation in the 1990s the domestic trucking industry is highly fragmented with many small truck operators (World Bank 2007a; 2011; 2012a). The survey confirms the high incidence of small operators and domestic ownership<sup>15</sup>. The argument of high fragmentation appears true for routes in large and connected cities. However, the relatively higher price-cost gap for unconnected cities is indicative of the possibility that fewer truckers operate in these markets allowing them to extract higher rents. Still, the competitive forces in Tunisia's trucking industry do not appear to drive down prices sharply.

Accompanying market fragmentation, there appears to be a clear lack of coordination of freight activity in the industry. The truckers report no role of unions or transport associations in the market. More than 50 percent of truckers report conducting business by direct contacts with shippers or by waiting at lorry parks. The survey reveals that in 50 to 75 percent of the cases, prices are set by direct negotiations with the client. Additionally, a majority of the 116 respondents report that there exists no system of load

consolidation; and, for the 13 percent that report some load consolidation, it occurs within the company itself. This lack of coordination is a likely cause of the higher costs as trucks often return empty on the return legs (approximately 72 percent of empty backhauls), which is much higher than for European transport companies (empty return represents 60 percent for small trucks and 46 percent for other types of vehicles)<sup>16</sup>. There is also no evidence of cartels bidding up transport prices as in the case in Sub-Saharan Africa. The analysis seems to highlight a lack of logistical coordination and poor operational efficiency as the main reasons for high costs and the resulting high prices.

There also remain barriers to entry for larger trucking companies that would bring stronger financial and technical capabilities. The regulations for entry into the road transport sector were revised in 2008 to impose higher capacity restrictions on new companies. The revision introduced higher investment obligations for any new operator wanting to enter the market compared to the existing operators—hence, the regulation does not encourage larger operators even if that was likely its original intended purpose. In addition, the original 1994 Decree restricts access by foreign operators, as they are obliged to enter into a partnership with Tunisian nationals to provide road transport services<sup>17</sup>. With regard to freight forwarding, however, the Ministry of Transport carried out a study, “*Etude du Plan National des Transports*,” which concluded that for international road transport the development of an equitable partnership with foreign companies having an international expertise and financial strength and credibility is difficult to conceive. Removing barriers to entry into the road transport sector for both domestic and foreign operators could also help drive costs down. In particular, foreign operators would probably be most interested in operating larger businesses/logistics chains rather than small ones.

## **10.4 / Attacking Regional Disparities: Balancing Spatial Equity with Economic Efficiency**

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As Tunisia’s policymakers try to economically integrate lagging and leading regions, they face a dual challenge of balancing spatial outcomes with economic efficiency. On the one hand, efficiency suggests that infrastructure investments are likely to yield the highest returns in the vicinity of Tunisia’s largest urban agglomerations in leading areas, where firms, people, and business are already locating. If markets are fluid and infrastructure appropriate, the density in these places will allow firms and people to further exploit agglomeration economies and economies of scale, leading to innovation, job creation, and growth. On the other hand, equity concerns would suggest that investments in lagging regions should be a priority. However, since market forces are not driving firms and people to these areas, some resources may be wasted. Other investments, such as those in social infrastructure, will have large benefits in lagging regions and throughout the national territory and can lead to increases both in efficiency and equity. Hence, public policy should focus on improving living conditions across the country to ensure quality of basic services (such as health, education, and transport), access to good infrastructure (such as transport and telecommunications), and more generally quality of life (including cultural events and recreational amenities). Differentiated policies for different regions are more likely to achieve the desired balance, in particular when the overall focus of public policy is to enhance welfare everywhere. In order to address regional disparities, there are four main lines of intervention open to policy makers:

### ***Ensure that economic policies are “spatially blind”***

As discussed in previous chapters, current economic policies exacerbate regional disparities. There is a need to revise the Investment Incentives Code, labor market rules and regulations, and agricultural policy to ensure that they do not inadvertently favor one region over another as is currently the case. The Investment Incentives Code favors the coastal region by providing large incentives to exporters. The labor market sector-wide collective wage agreements impose country-wide wage floors, to the disadvantage of poorer interior regions. Agricultural subsidies favor crops in which the interior regions do not have a comparative advantage,

to the advantage of northern regions. It is important to revise these policies to remove these distortions and ensure a level playing field across the entire country.

### ***Extending basic services: thinking beyond investments in infrastructure***

The analysis above suggests that efforts to equalize characteristics across regions should remain a key focus of future policy. Factor mobility does not appear the main impediment in Tunisia's urban areas, as the differences in returns across and within regions are relatively small. Rather, differences in characteristics drive the differences in consumption both across and within regions<sup>18</sup>. This result is important because it underlines the existence of disparities in several household characteristics across regions, as discussed above, and confirms that these disparities are associated with lower income levels—therefore extending access to basic services in lagging areas with the overall objective of achieving universal access and high quality of basic services and improving living conditions across the country should remain key objectives of government policy.

Extending basic services and access to quality health and education services can contribute to reducing regional disparities in Tunisia. Policy makers in Tunisia need to think beyond infrastructure provision to tariff design and cost recovery, which will extend access while improving service quality. In particular in basic services, moving toward cost recovery is essential. Other countries have seen positive impacts from these reforms. Algeria, Egypt, and Morocco have all decentralized administration and reformed tariff programs to increase cost recovery and encourage water conservation. In Algeria new legislation in 2005 allowed consumers to choose between an elevated fixed fee and a metered fee. The elevated fixed fee has encouraged consumers to pay progressive, metered tariffs, which encourages sustainability by decreasing demand and increasing cost recovery. And, by decentralizing water management, tariffs have also been set by location to match the real cost of provision and capital improvements (Pérard 2008). That many other countries have expanded service provision highlights the need for prices that can cover operating and non-operating costs while guaranteeing affordability<sup>19</sup>.

Leveraging private sector capital, either through operating or infrastructure partnerships, can expand networks and improve quality of service. Public-private partnerships can structure incentives for private participation to places where private investors alone would not go. In the Middle East and North Africa, Egypt, Jordan, and Morocco have developed their regulatory context to support private water supply providers, with contracts ranging from five to 25 years (Pérard 2008).

### ***Linking lagging areas to markets and addressing market failures***

Improving connectivity of lagging areas will also be key to providing equal opportunities across the country. Improving connectivity and mobility for firms and people in lagging areas can stimulate trade and allow people and firms to move to areas where they are most productive. By connecting poor populations to large cities and leading areas and reducing transport costs, countries create a win-win situation by promoting inclusive development. Connecting lagging areas to large markets and other leading areas will increase spatial concentration of economic activity in leading areas (increases in efficiency) but will also increase overall growth, although nominal income inequalities may increase on the whole. To enhance connectivity between lagging areas and the rest of Tunisia, lowering transport prices is important. Investments in infrastructure that facilitate the flow of goods, people, and information between leading and lagging areas can foster economic concentration in leading areas and promote convergence of living standards (World Bank 2008e). That said, as discussed above, in most of Tunisia the key bottleneck does not appear to be a lack of infrastructure.

Improving connectivity in Tunisia also requires government action to ensure that markets are functioning by removing coordination failures and improving the efficiency and competitiveness of the trucking sector. There appears to be a strong need to develop a system of third-party logistics for the coordination

of trucking operations, following the example of the Indian trucking industry. These recommendations echo previous World Bank work that points at a need to develop and implement innovative solutions like (a) third-party logistic services, (b) specialized infrastructure like logistic zones, and (c) regulatory support for implementation of new practices (World Bank 2007a; 2012a). The Tunisian government is currently developing logistic zones in the port of Rades and Djebel Oust and plans to develop them in several other cities, such as Jendouba, Gafsa, Zarzis, Sousse, and Sfax (Study of Regional Trade Facilitation and Infrastructure for Maghreb Countries, World Bank 2012a). These logistic zones, along with improved third-party logistics services, will go a long way toward improving the economic efficiency of trucking operations and lowering the costs and prices of road transport in Tunisia.

There is also a role for government to ensure equity in connectivity. Efficiency grounds would call for opening all routes to market forces and focusing only on enhancing competition. Equity advocates indicate, however, that low traffic in some areas (such as those in sparsely populated small cities) would make certain routes unattractive for private investors or operators, leaving those areas disconnected. For lagging areas, where demand is low, government intervention may be necessary to ensure that these places are still connected to the rest of the country. If left alone, the small volumes from lagging areas will discourage transport providers (Arvis et al. 2007). Sacrificing some efficiency may be necessary to achieve equity, but investments should be prioritized so that no efficiency is sacrificed unless equity is improved. In other cases, where markets are thin and attracting transport operators is difficult, encouraging intermediate modes of transport may be a good alternative. Bicycles, handcarts, motorcycles, power tillers and trailers, and community participation become essential to enhance mobility in rural areas (Lall and Astrup 2009).

In addition, efforts to address market failures (and improve access to markets) play a key role in reducing welfare gaps, especially between leading and lagging rural areas. Market failures appear to be a key constraint in rural lagging areas even when endowments are similar to those in leading areas. This is important because these are the areas where we find the greatest income disparities and largest poverty rates. It also confirms the existence of labor market frictions and segmentation that keep lagging rural areas isolated from economic opportunities.

***Providing incentives for firms and people to move to lagging areas in the hope of promoting an increase in economic activity and job creation.***

The provision of fiscal and financial incentives for regional development is unlikely to achieve meaningful results. In tackling the dual challenge of balancing spatial equity and economic efficiency, history suggests that policies that facilitate convergence of living standards across regions as well as concentration of economic activity in and around urban areas may help Tunisia transition from a middle-income to a high-income economy (World Bank 2008e). Coordinated policies under the first and second points described above can enhance efficiency of cities while also leading to improvements in equity. This third option-of providing incentives for firms and people to move, however, has proven to be an unsuccessful choice in trying to reduce regional disparities in different countries around the world.

The Tunisian experience also shows that incentives are not the solution to reducing regional disparities in economic activity. Since 1993, Tunisian legislation has enabled the government to provide incentives for private investment in lagging areas or priority zones, promulgated in the Investment Code revised in 2011 (*Code d'Incitations aux Investissements*). These incentives include tax exemptions on profits and a 50-percent reduction on taxable ceilings. Other countries have also attempted to reduce disparities between leading and lagging areas by de-concentrating economic activity or people—and most have failed. Indonesia's transmigration program tried to relocate people from Java to less populated areas such as Kalimantan, Papua, Sulawesi, and Sumatra. The objective was to promote more balanced development by providing land and new economic opportunities to poor settlers in Java. But the high-cost program



had no impact on Java's density or on poverty rates among migrants (World Bank 2008e). Egypt tried a different approach to de-concentrate its population away from the traditional centers of growth by planning 20 new towns over the past 20 years to reduce population growth in Cairo and the Nile Valley. Built for five million people, they have attracted barely 800,000 (World Bank 2014g).

Interregional transfers can be used to achieve convergence in living standards, however. While national transfers are likely to be important for lagging areas, policymakers should keep in mind that international experience suggests that interregional transfers are best used to achieve convergence in living standards. Resources are wasted when they are instead distributed with the objective of shaping economic activity (see box 10.3).

### **Box 10.3 Interregional Transfers Can Drive Convergence in Living Standards but Typically Fail to Shape Economic Activity**

International experiences suggest that interregional transfers can drive convergence in living standards but typically fail to shape economic activity. For example, equitable funding for public services is associated with reduced inequalities in opportunity for households. In Japan major investments in basic services and infrastructure through transfers beginning in the 1970s are widely credited with evening living standards and the subsequent convergence in incomes between leading and lagging areas (World Bank 2008e).

International experience also suggests that, to maximize impact, transfers should prioritize low-income or fast-growing areas, reward areas with higher return to investment with more allocations, and ensure equitable distribution based on need (World Bank 2008e).

In the European Union transfers have not achieved convergence in economic activity but have led to convergence of living standards. Supranational regional equity transfers in the European Union, the structural and cohesion funds, have accounted for over 30 percent of total EU spending for many years, around €347 billion in 2011. Despite their large size, there is no evidence that the transfers have led to convergence in incomes; however, positive impacts on human development indicators have been documented (Checherita, et al. 2009). In lagging regions in Portugal, for example, convergence in income has not occurred, but some regional equity indicators have improved (Arcalean, et al. 2012). Improvements have not come uniformly, however, to all regions; convergence was more likely in areas with institution-building components and regional and private cofunding. More flexible funding has also been correlated with improved outcomes. In Argentina interregional transfers were strongly associated with increased human development when allocated unconditionally (Habibi, et al. 2003).

In 1970 Japan initiated the "New Economic and Social Development Plan" with the main objective of addressing disparities in living standards that widened as a result of accelerated growth in the largest industrial areas. The plan provided public investment in basic services and social institutions everywhere in the country, with additional investments directed to less developed areas. The main objective was for these areas to achieve a minimum standard in access to basic services. The central government provided both earmarked and non-earmarked transfers. The earmarked transfers were allocated mostly to investments in basic services (including rural roads) and social institutions (such as public utilities, medical facilities, and schools) and used cost-sharing agreements with local governments.

Conversely, transfers that attempt to achieve convergence of incomes or economic activity often fail. As in Tunisia, firms rarely locate in regions with poor connectivity and few agglomeration economies, despite incentives, resulting in lost public investment (Deichmann, et al. 2008; Schultze 1983; Glaeser and Gottlieb 2008). In fact, these types of transfers have been linked to worsening regional equity; a recent study of the Organization for Economic Co-operation and Development countries found a correlation between higher interregional transfers and slower convergence (Kessler and Lessmann 2010).

*Source: World Bank 2014g.*

## 10.5 / Conclusions

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The persistence of regional disparities has been made worse by current economic policies. Economic growth and public investments in human development contributed to impressive improvements since 1990 in health and education. Tunisia remains characterized, however, by significant regional disparities—and the resulting social tensions are widely regarded to have been one of the triggers of the 2011 revolution. Paradoxically, to a large extent these disparities have been entrenched, if not exacerbated, by the current set of economic policies. The industrial policy, through the Investment Incentives Code, strongly favors exports that are naturally located along the coastal regions (Chapter Four). Competition policy has restricted access to most of the onshore domestic economy, enabling a web of regulation and cronyism to hinder the development of the domestic onshore economy (Chapter Two and Chapter Three). Labor market policies introduce rigidities by forcing common national wages, discouraging employment in interior regions where productivity of labor is lower (Chapter Five). Even agricultural policies favor water-intensive arable crops located in northern and coastal areas to the detriment of arboriculture, horticulture, and sheep and goat breeding, which are labor-intensive activities mainly located in interior regions (Chapter Nine). These policies have exacerbated the already higher production costs in interior regions due to weaker infrastructure and lower connectivity.

The solution is not the provision of fiscal and financial incentives; rather it is essential to improve the quality of life, access to basic services, and connectivity of interior regions. In addition to removing the distortions introduced by existing policies, international experience shows that government should focus on improving services and connectivity. This is confirmed in the case of Tunisia. The analysis presented in this chapter highlights that most of the consumption gap between urban areas in lagging and leading regions appears due to differences in household characteristics (that is, education, access to basic services, and the like) while differences in returns to household endowments (for example, due to limited connectivity and/or other market failures) are most important when looking at differences between rural areas in lagging and leading regions. This suggests that the government should: (a) focus its interventions to extend access to basic services in lagging areas with the overall objective of achieving universal access and high quality of basic services (such as health, education, and transport) and more broadly quality of life across the country (including cultural events and recreational amenities) and (b) improve the links of lagging areas to markets through improvements in connective infrastructure (such as transport and telecommunications) and through improving the operation of markets (to ensure that the existing infrastructure is used efficiently). International experience shows, and indeed the Tunisian experience confirms, that financial and fiscal incentives to investors are not an alternative for these policies.

There is a role for the government in ensuring that competitive markets are well functioning. The case of the Tunisia trucking industry provides a useful example that liberalizing a market does not ensure its good operation. The trucking industry in Tunisia was liberalized in the 1990s; and, although it displays a high level of fragmentation with many small operators, it does not appear to deliver low freight prices. The data seem to indicate a lack of logistic coordination and poor operational efficiency as the main reasons for high costs and the resulting high prices. This calls for a strong role of the government in helping to overcome these coordination failures by supporting the development of a system of third-party logistics for the coordination of trucking operations. In addition, removing barriers to entry for domestic and foreign operators may foster a consolidation toward larger groups and drive prices down—which would improve connectivity and contribute to fostering development in interior regions.

## Notes

1. This chapter draws on the Tunisia Urbanization Review (World Bank 2014g). This chapter does not discuss issues related to local government and decentralization as these are treated in detail in the Tunisia Urbanization Review.
2. Tunisia is organized in 24 governorates that can be aggregated into seven administrative regions, each comprising several contiguous governorates: Greater Tunis (Tunis, Ariana, Ben Arous, La Manouba); North East (Bizerte, Nabeul, Zaghouan); North West (Beja, El Kef, Jendouba, Siliana); Center East (Mahdia, Monastir, Sfax, Sousse); Center West (Kairouan, Kasserine, Sidi Bouzid); South East (Gabes, Medenine, Tataouine); South West (Gafsa, Kebili, Tozeur). Greater Tunis, North East, and Center East are considered leading areas while the North West, Center West, South East, and South West are considered lagging areas.
3. See the recent *Livre Blanc Tunisie : nouvelle vision du développement régional*, Ministère tunisien du développement régional, November 2011.
4. Senior staffs in the Tunisian administration have pointed out that, even though reducing regional disparities was often mentioned, in fact it was not a priority objective under former president Ben Ali.
5. It should be acknowledged that even the wealthier cities of Tunis, Sfax, and Sousse have pockets of poverty.
6. The same survey brings evidence that the coast has a larger percentage (25 percent versus seven percent in the interior) of unemployed who turn down jobs because of a perceived incompatibility between their educational qualifications and the available job opportunities.
7. Tunisia's modal mix of domestic freight transportation is highly skewed toward road transport, with more than 80 percent of all domestic movements being carried by trucks. While 4 percent of domestic goods are transported by sea, railways account for only about 14 percent of all land-based transport of goods (Study on Freight Transportation: Diagnosis of the Current Situation, A Synthesis Report 2001, see World Bank 2007a). Given the importance of road and freight transport for Tunisia's economy, we focus on measuring physical road connectivity and economic costs of road freight transport in the country.
8. Mere straight-line distances fail to capture the nuances of economic distance that, especially in the case of freight movements, consists of time and money costs (World Bank 2008e; World Bank 2012a, among others). Several factors affect actual travel conditions—the existence of a road network, the terrain on which the network is built, the quality of the network like number of lanes, the roughness of the road, and the pavement ratio—and as a result determine travel time and travel costs.
9. The relatively good physical connectivity observed in Tunisia reflects the recent efforts by the government of Tunisia to modernize its road network, focusing on the development of highways as a key instrument to strengthening competitiveness. The efforts started as early as 1998 where the Tunisian government defined a highway development plan promoting the development of highways going out of Tunis.
10. It is also interesting to note that the port of Gabes is not well integrated to the rest of the country and that there are also some coastal areas in the north that have lower market access.
11. While connectivity appears to be good, the indicators shown in this section are not able to identify issues about capacity or detailed quality of the roads. This is an important issue and should be explored in future work. For details on the assumptions used for these calculations see World Bank 2014g.
12. A survey of Tunisia's trucking industry was conducted by the World Bank in 2012 to better understand the nature of intercity and interregional freight transportation. A random sample is drawn from a total population of 125 trucking companies and 480 individual truck owner-operators from a pool of registered and non-registered. It includes detailed information on prices charged by truckers, the costs of operation, key characteristics of trucking services (like mileage, payload utilization), and significant obstacles faced by service providers. The information was collected from 84 individual truckers and 49 trucking companies with a median employment size of 20 full-time permanent employees. Following domestic deregulation, the industry has no state ownership and less than 10-percent foreign ownership, reflecting a domestic industry run by small operators and medium-sized firms. The analysis provides insights into the market structure of the industry, the economic efficiency of operation, and the challenges faced in freight connectivity like infrastructural bottlenecks and the regulatory environment.
13. The results of the survey suggest that possible causes underlying high prices are high operational costs, especially fuel and maintenance associated with less modern truck fleet, and operational inefficiencies (poor road quality and congestion).
14. The national average estimated price-cost gap is 44 percent, which while large is still considerably lower than the profit margins estimated for international routes in African countries like Chad (163 percent), Ghana (80 percent), Kenya (66 percent), and Uganda (86 percent) (Teravaninthorn and Raballand, 2009).
15. There are 1,600 registered trucking operators (including individual truckers), and the number of non-registered operators is estimated at 40,000 (trucks with gross weight load less than 12 tons are not required to obtain a permit). Of 133 respondents, 65 percent are individual truck owners who own fewer than two trucks; and 90 percent of the sample is domestically owned companies or local truck operators. As part of subjective responses, more than three quarters of the respondents report facing tough competition from more than five competitors and almost all report at least two to five competitors. More than 50 percent of respondents report facing competition from individual truckers and another 30 percent from local small- and medium-sized trucking companies.
16. <http://www.euromedtransport.org/En>
17. Decree 94/1994; and also see 2008 Agreement on Concessions of Road Transport (*Agreement de concessionnaire en matériels de transport routier*) available at: <http://www.commerce.gov.tn/>
18. This is in contrast to what has been found in countries in Latin America, and even in Egypt, where factor mobility is a concern within regions but not across regions (World Bank 2014g).
19. In Colombia policies that loosened caps on fee increases permitted private water utilities to recover costs and expand operations. Similarly, for electricity, Colombia loosened regulations to permit more companies to join the market and recently became a net power exporter (World Bank 2013d).

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