

Marching to the beat of a late drummer: Turkey's experience of neoliberal industrialization since 1980

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Abstract

The paper discusses the main characteristics of Turkey's experience of neoliberal industrialization since 1980. We suggest that Turkey has been a "successful follower" in the sense that it has achieved structural transformation in manufacturing output and exports, while its mode of articulation with the global economy has remained intact. To follow our premise, we first provide a comparative overview of the dynamics of growth, productivity, employment and trade in the post-1980 period. We focus on the manufacturing industry because it has evolved as the leading sector in the restructuring of the economy away from domestic demand-oriented import substitution towards export orientation and integration with global production networks. To analyze the direction of structural change in a comparative perspective, we also offer a synopsis of divergent patterns of development in Turkey and Korea. Our brief comparison emphasizes that, while Korea has rapidly changed the structure of its industry and mode of articulation with the world economy with the sense of direction provided by a pro-active state and a far-reaching industrial policy, Turkey has remained a follower ever trying to reach its moving target.

Keywords: Industrialization, structural change, industrial policy, productivity decomposition, neoliberalism.

Even a passing glance at the path of the long-term growth trajectory of the Turkish economy must visibly identify 1980 as a point of struc-

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tural break. Marking the peak of the balance of payments crisis of the late 1970s, 1980 also denotes the collapse of the import substitution industrialization (ISI) coalition of the previous two decades. In its place, comes the era of “neoliberal policy making” shaped by internationalization and market-based orientation on the “economic” ground.

If one divides Turkey’s experience of neoliberal industrialization into two, the 1980-2001 and post-2001 periods, the first phase, dominated by the principles of Washington Consensus, is mainly characterized by a gradual opening up of the economy towards full integration with the world commodity and financial markets. The period of 1980-88 was marked by commodity trade liberalization and export promotion, along with a price reform aimed at reducing the state’s role in economic affairs. The existing system of a fixed exchange rate was replaced by a flexible crawling-peg, and this, together with the introduction of a compound system of export subsidization and a long wage-freeze under the military government, acted as the main instrument of the export-oriented growth policy.

In 1989, the maneuver of capital account liberalization served as one of the major policy initiatives undertaken in order to sustain the culminating fiscal deficits and macroeconomic imbalances of the late 1980s. Yet this also paved the way for the injection of liquidity into the domestic economy, in the form of short-term foreign capital, further leading to erratic movements in the current account and ever-increasing vulnerability to external shocks, eventually surfacing in crises in 1994, 1999 and 2001. This second decade of neoliberalism in Turkey represents the unhappy face of the “Washington Consensus,” and is often regarded as the “lost decade”¹ or “a decade to forget.”²

The post-2001 era is the second phase of the neoliberal restructuring of the Turkish economy, this time in line with key principles drawn up by the “Post-Washington Consensus”: good governance through strong market-regulating institutions (especially in banking and finance) as well as consumer protection and competition regulation to achieve sustainable (and equitable?) growth. On the economic front, the Central Bank was granted its independence to work toward a sole mandate of maintaining price stability through “inflation targeting” monetary policy. In

1 Ebru Voyvoda and Erinç Yeldan, “Patterns of Productivity Growth and the Wage Cycle in Turkish Manufacturing,” *International Review of Applied Economics*, no. 15 (2001); Ziya Öniş and Fikret Şenses, “Global Dynamics, Domestic Coalitions and a Reactive State: Major Policy Shifts in the Post-War Turkish Economic Development,” *METU Studies in Development* 34, no. 2 (2007).

2 Şevket Pamuk, “Economic Change in Twentieth-Century Turkey: Is the Glass More than Half Full?,” in *The Cambridge History of Turkey: Volume 4 - Turkey in the Modern World*, ed. Reşat Kasaba (Cambridge: Cambridge University Press, 2008).

an era in which foreign investor presence has been a dominant element of “sustainable development,” fiscal policy was also shaped around a “primary surplus target” to “enhance” the *credibility* of the Turkish economy by ensuring a reduction in its country risk perception in international markets.

All told, the neoliberal restructuring period spans the transformation of the Turkish economy from domestic, demand-oriented import substitution industrialization to one with export orientation and integration with global commodity and financial markets and production networks. During this period, the manufacturing industry has evolved as the main sector in leading the export orientation of the economy, and also as a focal sector wherein this restructuring has taken place. Such restructuring, obviously, has not been independent of the evolution of the power structure between external and internal actors, the associated micro and macroeconomic policy shifts at the national level, or the reshaping of the global economy.

At the end of the 1970s, Turkey, like many other developing countries that adopted ISI, faced a severe balance of payments crisis, escalated by a rapid rise in the price of oil imports and very costly external borrowing schemes. Slowing economic growth and culminating external debt, along with increasingly unstable political conditions, paved the way for the end of the ISI period with the military intervention of 1980. The “rescue package” designed and implemented with the heavy involvement of the IMF and the World Bank, seeded the principles of the neoliberal model.

On the economic/industrial policy front, the theoretical ground for the post-1980 program followed the argument that under conditions of market liberalization, relative price movements along with outward orientation would help the industry achieve efficient resource allocation. As industry was exposed to more competition and technological know-how in the global markets, rapid gains in productivity would be converted into industrial restructuring towards technological competence, increased human capital and an environment of comparative advantage. Thus, industry would also serve as the engine of growth for the rest of the economy.

Yet, the fact that this expectation did not flatteringly materialize throughout the neoliberal period is particularly associated with the economy’s structure. On the economic front, there have been fundamental (initial) weaknesses in terms of technological adaptation, education and entrepreneurial capacities (human and social capital). On the political economy front, the main contributing elements should be regarded

as the heavy influence of external actors on the structuring and restructuring of economic policy making in between large swings of “boom and bust” and major economic crises, as well as limitations induced by the existence of a “reactive” state which often lacks a “sufficient degree of autonomy” to design and implement a sound industrial policy.³ Such a pattern is exposed in the major deficiencies of neoliberal industrial restructuring, in the rather loose association between gains in productivity on the one hand, and in the dismal patterns of employment, investment and remunerations for wage labor on the other.

It is the purpose of this study to depict and decompose the fundamental characteristics of restructuring of the Turkish industry in the neoliberal period. To this end, we focus particularly on the mode of integration of industry with the world economy, and on the key indicators of industrial performance, including productivity, employment and elements of structural change. In order to analyze the direction and pace of structural change in a comparative perspective, we also provide a brief discussion of Turkey’s mode of articulation with the world economy.

Our analyses indicate that Turkey has been a “successful follower” during the neoliberal period. It is successful in terms of increasing output (GDP) and productivity at a respectable (but not an extraordinary) rate over a long period, and in achieving structural change in manufacturing output and exports, albeit at a slow pace, shifting from the dominance of resource-intensive sectors (agricultural products and food) in the 1970s, to low technology industries (textile and clothing being the leading example) in the 1980s, and towards medium technology sectors (machinery and automotive) since the mid-1990s. However, Turkey has been a follower country in the sense that the structure of its manufacturing output and exports has evolved towards the one that is being left behind by more developed countries. In spite of all the changes observed in the Turkish economy, its mode of articulation with the world economy (read this as the European economy) has remained intact, and, under the limitations induced by the non-existence of a comprehensive industrial policy and influential proactive state, what we call the “late drummer” (i.e., the so-called

3 For contributions analyzing the effects of the dynamics of power structure, reactive state and economic crises in Turkey, see, e.g., Korkut Boratav et al., *Globalization, distribution and social policy: Turkey: 1980-1998*, Working Paper Series, No.20 (CEPA and The New School for Social Research, 2000); Pamuk, “Economic Change”; Fikret Şenses, “Structural Adjustment Policies and Employment in Turkey,” *New Perspectives on Turkey*, no. 14 (1996); Fikret Şenses and Erol Taymaz, “Unutulmuş Bir Toplumsal Amaç: Sanayileşme. Ne Oluyor? Ne Olmalı?,” in *İktisadi Kalkınma Kriz ve İstikrar*, eds. Ahmet H. Köse, Fikret Şenses, and Erinç Yeldan (İstanbul: İletişim, 2003); Voyvoda and Yeldan, “Patterns of Productivity Growth”; Öniş and Şenses, “Global Dynamics.”

“market forces” reflecting the existing division of labor) has been the main determinant of the path and pace of industrialization.

The paper is organized as follows: After an introduction that summarizes the basic characteristics of neoliberal industrialization in Turkey, the second section discusses the dynamics of restructuring in Turkish manufacturing in detail, with a special emphasis on the periods of trade liberalization (1980-88), financial liberalization (1989-2000), and post-2001. The third section analyzes the direction and pace of structural change in comparative perspective, discussing the mode of articulation with the world economy, and offering a short explanation for the divergent patterns of development in Turkey and Korea. The last section of the paper summarizes the main findings and draws out policy implications.

Dynamics of restructuring in Turkish manufacturing

In this section, we provide a comparative overview of the dynamics of growth, productivity, employment and trade patterns of Turkish manufacturing industries in the post-1980 period. To this end we employ (labor productivity) decomposition analyses both at the sectoral and firm levels. Such decomposition analyses assist us in identifying the direction and the magnitude of contributions to productivity growth in various strata; from sub-sectoral and firm to industry levels.⁴

Growth, foreign trade and employment

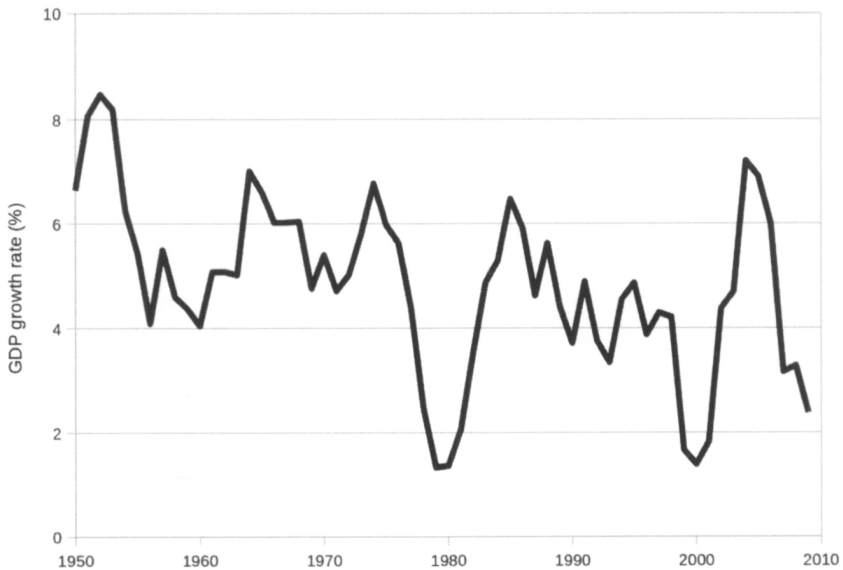
We can observe the long term dynamics of the key variables of production and trade in Figure 1. Figure 1.a and 1.b present paths of growth and foreign trade variables for the overall economy and Figure 1.c shows the output and employment dynamics for the Turkish manufacturing industry. From the figures, one can clearly observe the effect of opening up policies on the economy: the volume of foreign trade, which had showed only meager increases until the 1980s, has accelerated, and from a level of 15 percent in 1977-1980 has reached around 50 percent of GDP in 2011. Yet, throughout this period, export performance has been unable to close the gap with import demand. That the rate of growth in exports has lagged behind the rate of growth of imports has been most

4 For details of decomposition analyses at the industry level, see Ebru Voyvoda, *Dışa Açılma Sürecinde İstihdam, Ücretler ve Emek Üretkenliği: Türkiye İmalat Sanayii, 1970-2001* [mimeograph] (2008); Voyvoda and Yeldan, “Patterns of Productivity Growth.” For details of the estimation and decomposition analyses at the firm level, see Erol Taymaz et al., *Global Links and Local Bonds: The Role of Ownership and Size in Productivity Growth*, Working Paper, No. 1020 (Istanbul: TÜSIAD-Koç University Economic Research Forum, 2010).

conspicuous in the post-2001 period, leading to a record high trade deficit of about 10 percent of GDP in 2011.

Concomitantly, one can observe from Figure 1.a that the growth pattern of the economy has also gone through a structural transformation since 1980. Following the major recovery from the 1977-1980 crisis, the boom and bust cycles of the economy have become ever more unsustainable, increasing in both magnitude and frequency, especially throughout the 1990s.

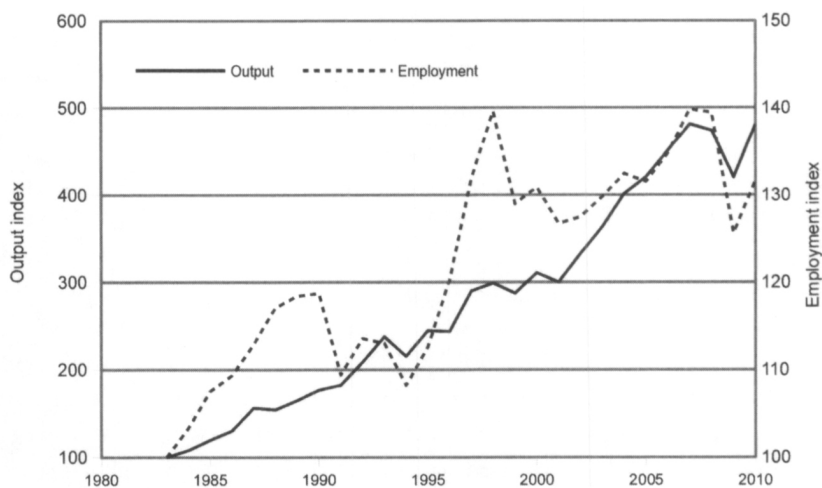
Figure 1a: Patterns of economic growth in Turkey, 1950-2009 (annual rates of GDP growth, 5-year moving averages)



Source: Turkstat.

Figure 1b: Exports and imports of goods, 1974-2010 (percentage of GDP)

Source: Turkstat.

Figure 1c: Indices of manufacturing output and employment, 1983-2010 (1983=100)

Sources: Turkstat, 1983-2001 Annual Survey of Manufacturing Industries, 2002-2010 Short Term Statistics (Industrial Output and Employment).

As of 2011, Turkish manufacturing industries are responsible for around one fifth of total domestic value added, and account for more than 90 percent of total exports. Industry (including construction) employs about 6.4 million of the labor force and accounts for many more jobs indirectly through the supply chain and the associated service industries. Such a picture is, of course, closely related to the long-term dynamics of the overall economy and the post-1980 restructuring: Figure 1.c. indicates that the cycles of output and employment in industry closely follow the boom and bust cycles of the economy, yet it also shows that downturns (and upturns) for employment are more pronounced compared to those of output.

The early decades of neoliberal restructuring: The 1980-88 “trade liberalization” and the 1989-2000 “financial liberalization” periods

Table 1 provides a selected set of indicators for the manufacturing sectors of the Turkish economy for the 1980-2000 period. It can instantly be observed from the table that the export/production ratio increased in both the 1980-88 and the 1989-2000 periods. The number of sectors that show “export-orientation” behavior are also observably considerably higher for the 1989-2000 period. On the other hand, if one contrasts this picture with the “domestic demand-oriented ISI period” of the 1960 and 1970s, post-1980 Turkish manufacturing industry displays a much lower rate of employment growth. The annual rate of growth in real value added in 1970-76 of 5.6 percent was accompanied by an employment growth of 5.1 percent per annum. The annual average rate of growth in employment of 2.7 percent is, however, well below the rate of growth in output of 10.4 percent in the 1980-87 “trade liberalization” period.

The structural difference in the modes of production and employment generation between the two periods is apparent if one compares the columns displaying the (cumulative) rate of growth of value added with the rate of growth of employment for the manufacturing sectors for 1980-88 and 1989-2000 respectively (Columns 3 and 5 of Table 1). It is clear from the comparison of the two figures that the average employment growth in manufacturing sectors for the 1989-2000 period is much lower than the average employment growth for the 1980-88 period. It is only the (ISIC Rev 2, 3 Digit: 314) “Tobacco” and (353&354) “Petroleum Products” sectors that display negative employment growth rates during the 1980-88 period. Yet the number of sectors with negative growth rates of employment increases and reaches 8 out of 19 sectors of industry in 1989-2000.

Table 1: Selected indicators, Turkish manufacturing industry, 1980-2000
1980-1988

| ISIC Rev. 2 | Sectors | Sectoral production share | Sectoral employment share | Growth rate, real VA (%) | Growth rate, labor productivity (%) | Growth rate, employment (%) | Growth rate, wages of production workers (%) | Growth rate, exports (%) | Exports/Production | Contribution to industry productivity growth |
|-------------|-----------------------------------|---------------------------|---------------------------|--------------------------|-------------------------------------|-----------------------------|--|--------------------------|--------------------|--|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 311&312 | Food products | 0.17 | 0.15 | 7.10 | 5.38 | 1.81 | -1.39 | 5.73 | 0.38 | 14.96 |
| 313 | Beverages | 0.03 | 0.01 | 11.15 | 9.35 | 1.90 | -3.01 | 44.72 | 0.03 | 4.83 |
| 314 | Tobacco | 0.05 | 0.05 | 18.14 | 25.70 | -5.30 | -4.35 | 6.59 | 0.46 | 26.25 |
| 321 | Textiles | 0.11 | 0.20 | 8.70 | 5.66 | 2.94 | 0.21 | 15.04 | 0.57 | 5.75 |
| 322&323&324 | Textile apparel, leather products | 0.03 | 0.05 | 19.11 | 14.32 | 10.35 | -4.61 | 125.12 | 0.05 | -6.39 |
| 331 | Wood and cork products | 0.01 | 0.02 | -11.26 | -12.99 | 1.46 | -5.21 | 62.60 | 0.31 | -1.69 |
| 332 | Furniture | 0.00 | 0.01 | 25.67 | 15.18 | 9.09 | 5.05 | 144.84 | 0.48 | 0.22 |
| 341 | Paper and paper products | 0.02 | 0.02 | 10.67 | 6.23 | 4.21 | -6.57 | 81.46 | 0.09 | 1.06 |
| 342 | Printing and publishing | 0.06 | 0.01 | 6.42 | 2.07 | 4.38 | -5.29 | 64.96 | 0.04 | 2.01 |
| 351&352 | Chemical ind. | 0.12 | 0.06 | 9.77 | 4.49 | 5.21 | -1.51 | 42.14 | 0.22 | 15.76 |
| 353&354 | Petroleum refineries and products | 0.12 | 0.01 | 41.48 | 36.50 | -0.64 | 3.02 | 57.40 | 0.04 | 30.63 |
| 355 | Rubber and plastic products | 0.01 | 0.01 | 12.40 | 8.85 | 3.70 | -0.61 | 48.02 | 0.16 | 2.29 |
| 36 | Non-metallic mineral products | 0.08 | 0.08 | 3.97 | -0.27 | 4.14 | -2.80 | 43.57 | 0.22 | 0.07 |
| 371&372 | Basic Metal Industries | 0.07 | 0.09 | 12.63 | 10.66 | 1.77 | -2.59 | 62.72 | 0.31 | 13.37 |
| 381 | Metal Products | 0.01 | 0.05 | 7.02 | 4.27 | 2.90 | -0.32 | 50.08 | 0.19 | -1.22 |
| 382 | Non-electrical machinery | 0.02 | 0.05 | 8.95 | 7.28 | 1.95 | -0.45 | 98.65 | 0.30 | 1.11 |
| 383 | Electrical machinery | 0.01 | 0.04 | 31.17 | 25.59 | 4.42 | -0.90 | 68.55 | 0.15 | -8.96 |
| 384 | Motor vehicles | 0.05 | 0.06 | 5.60 | 2.49 | 3.04 | -6.70 | 47.51 | 0.08 | 1.18 |
| 356&385&390 | Other Industry | 0.01 | 0.02 | 15.30 | 8.14 | 6.71 | 1.96 | 97.93 | 0.16 | -1.23 |

Source: Turkstat

Table 1: Selected indicators, Turkish manufacturing industry, 1980-2000
1989-2000

| ISIC Rev. 2 | Sectors | Sectoral production share | Sectoral employment share | Growth rate, real VA (%) | Growth rate, labor productivity (%) | Growth rate, employment (%) | Growth rate, wages of production workers (%) | Growth rate, exports (%) | Exports/Production | Contribution to industry productivity growth |
|-------------|-----------------------------------|---------------------------|---------------------------|--------------------------|-------------------------------------|-----------------------------|--|--------------------------|--------------------|--|
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 311&312 | Food products | 0.12 | 0.14 | 1.51 | 1.50 | 0.10 | 6.13 | 6.02 | 0.33 | 1.13 |
| 313 | Beverages | 0.02 | 0.01 | -0.13 | 1.84 | -1.74 | 5.69 | 10.74 | 0.05 | -3.80 |
| 314 | Tobacco | 0.04 | 0.03 | 11.99 | 19.10 | -5.37 | 13.73 | 8.35 | 0.45 | 19.24 |
| 321 | Textiles | 0.11 | 0.22 | 4.89 | 2.78 | 2.36 | 5.99 | 10.25 | 0.73 | 3.30 |
| 322&323&324 | Textile apparel, leather products | 0.03 | 0.10 | 99.28 | 94.60 | 4.05 | 5.73 | 11.62 | 0.06 | -5.90 |
| 331 | Wood and cork products | 0.01 | 0.01 | 95.12 | 98.20 | -2.25 | 10.91 | 14.29 | 0.17 | 14.25 |
| 332 | Furniture | 0.01 | 0.01 | 1.11 | -8.42 | 8.18 | 4.62 | 35.48 | 0.26 | -0.34 |
| 341 | Paper and paper products | 0.02 | 0.02 | 13.20 | 14.27 | -1.07 | 15.79 | 12.49 | 0.13 | 7.65 |
| 342 | Printing and publishing | 0.02 | 0.01 | 121.89 | 150.48 | -0.47 | 3.63 | 18.31 | 0.03 | -3.84 |
| 351&352 | Chemical ind. | 0.13 | 0.05 | 4.56 | 5.55 | -1.12 | 7.30 | 3.85 | 0.30 | 8.65 |
| 353&354 | Petroleum refineries and products | 0.11 | 0.01 | -3.32 | -4.65 | 2.35 | 6.53 | 13.66 | 0.05 | -14.64 |
| 355 | Rubber and plastic products | 0.01 | 0.01 | -11.13 | -10.76 | 0.25 | 8.19 | 13.62 | 0.31 | -2.35 |
| 36 | Non-metallic mineral products | 0.07 | 0.07 | 6.50 | 7.99 | -1.15 | 5.41 | 10.25 | 0.26 | 20.77 |
| 371&372 | Basic Metal Industries | 0.08 | 0.07 | 4.36 | 8.11 | -3.23 | 12.09 | 5.81 | 0.53 | 23.05 |
| 381 | Metal Products | 0.03 | 0.05 | 23.87 | 22.56 | 2.08 | 10.76 | 15.04 | 0.31 | -2.21 |
| 382 | Non-electrical machinery | 0.04 | 0.05 | 15.71 | 15.36 | 0.32 | 10.93 | 14.19 | 0.30 | 16.16 |
| 383 | Electrical machinery | 0.06 | 0.05 | 22.00 | 20.27 | 1.73 | 16.02 | 17.23 | 0.42 | 14.97 |
| 384 | Motor vehicles | 0.05 | 0.07 | 9.51 | 6.38 | 2.11 | 10.62 | 29.43 | 0.26 | 3.84 |
| 356&385&390 | Other Industry | 0.03 | 0.03 | 21.55 | 17.30 | 4.38 | 10.29 | 21.65 | 0.33 | 0.08 |

Source: Turkstat

On the other hand, wages and labor productivity in the manufacturing industry in these two periods follow different routes (Columns 4 and 6 in Table 1). During the export promotion period of 1983-87, export revenues increased at an annual rate of 10.8 percent on average, and GDP rose at an annual rate of 6.5 percent. Yet, the period is also characterized by a severe erosion of wage incomes via repressive measures against organized labor. Overall, for the 1980-88 period, the rate of growth of labor productivity was in the order of 7.5 percent on average, while real wages dropped by 2 percent during the same period. Therefore, the share of wage labor in manufacturing value added reduced from its average of 35.6 percent in 1977-80 to below 20 percent in 1988.⁵

If such observations are to be associated with the major attributes of the policy-making environment during the same period, one should emphasize that both the involvement of the IMF and the World Bank in the severe economic crisis of the late 1970s and the military intervention of 1980 have affected the gradual settlement of the neoliberal model and its instruments. Otherwise, it has been underlined in the literature that the dominating coalition of the ISI period—the large industrialists, economic bureaucracy and organized labor—largely favored the domestic market-oriented model.⁶ Yet the influential advocacy of the neoliberal agenda by Turgut Özal and his new team of bureaucrats, as well as the enforcement of a generous export subsidization program, led to an alliance between the state and export-oriented capital.

From the employment/wage patterns described above, it is evident that the working classes have been the losers in this first phase of neoliberal restructuring. Implemented under military rule and severe restrictions in the Labor Code against collective bargaining and unionization, the cost and employment savings on wage labor during 1980-1987 and 1989-2000 were instrumental in the declining trend in the wage share and in extracting an economic surplus which was, in turn, oriented to export markets.

This “classic” mode of surplus extraction through suppressed wages, along with real devaluation and substantial export promotion, led industry to integrate with global markets mostly through resource and labor-intensive sectors in this period. The employment share of labor intensive sectors in manufacturing was around 40 percent in 1963. Following the

5 Indeed, data from the Turkish Statistical Institute (TÜİK) suggests that while the average real value added per worker employed increased by 160 percent between 1980 and 1996, real wage earnings barely attain their 1980 level after 1996.

6 See, for example Öniş and Şenses, “Global Dynamics”; Pamuk, “Economic Change”; Korkut Boratav, “Türkiye’de Popülizm: 1963-1976,” *Yapıt*, no. 1 (1983).

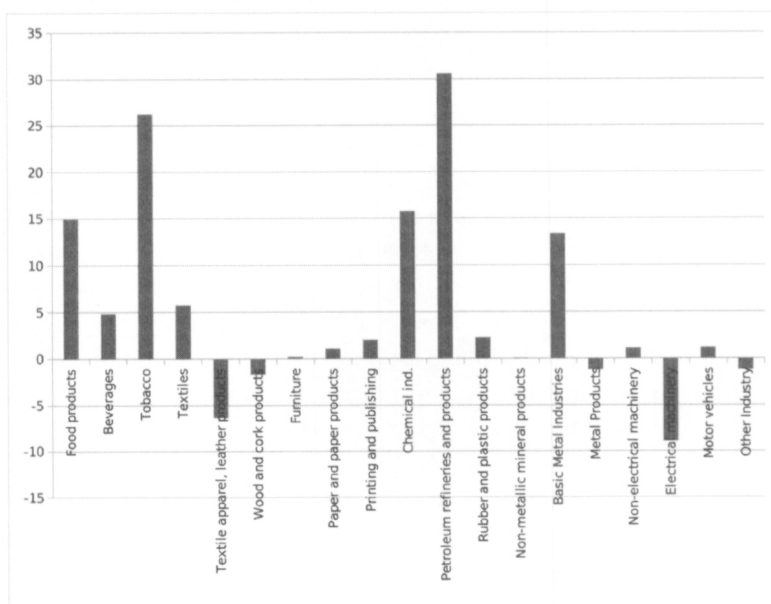
planned ISI period of the 1970s, the share dropped to 28 percent before increasing back to 40 percent again towards the end of the 1990s.

The last column of Table 1 and figures 2.a. and 2.b display the contributions of sectors of industry to overall productivity growth for the 1980-88 and 1989-2000 periods. Our analysis of productivity decomposition here reveals that the "leading" sectors of the 1980-88 period in terms of "technological change" and productivity growth were (353-354) "Petroleum Products," (351-352) "Chemical Products" and (342) "Paper, Paper Products and Printing." None of the major exporting sectors of the 1980s such as (321) "Textiles and Apparel," (371&372) "Iron and Steel and Metal Industry," (331&332) "Wood Products and Furniture" generated sufficiently strong productivity contributions, nor did they admit strong inter-industry linkages to serve as leading sectors propelling the rest of the economy.⁷

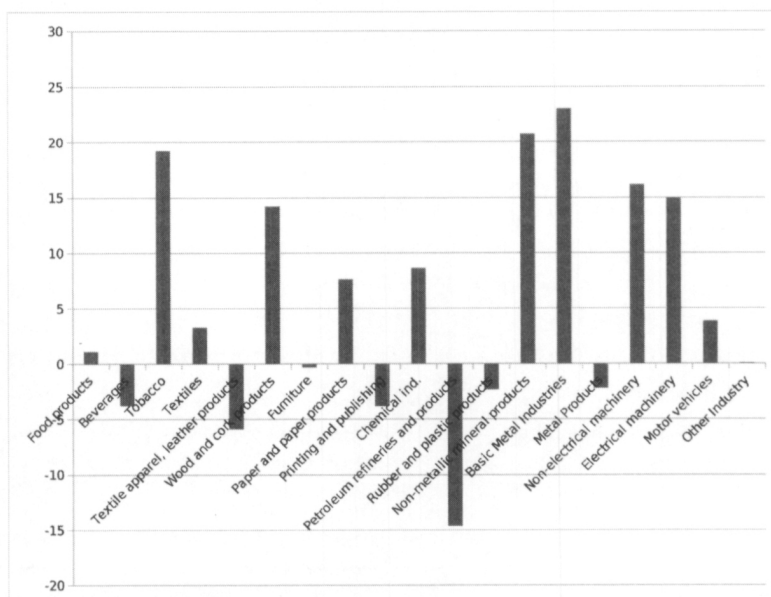
Perhaps one should associate such a picture with the overall macro-economic performance of the economy during 1980-88. The suppression of wages was instrumental both in lowering production costs and also in squeezing domestic absorption capacity. The share of investments increased to 21 percent of GDP. However, the composition of total fixed investments displayed quite adverse trends at the sectoral level from the long-term growth perspective. In fact, while the gross fixed investments of the private sector increased by 14.1 percent during 1983-87, only a small portion of this amount was directed to manufacturing. The rate of growth of private manufacturing investments was of the order of half of this figure, at a rate of only 7.7 percent per annum, and could not reach its pre-1980 levels in real terms until the end of 1989. Much of the expansion in private manufacturing investments originated from the pull of housing investments, which expanded by an annual average rate of 24.5 percent during 1983-87. This resulted in a significant anomaly as far as the official stance towards industrialization was concerned: in a period where outward orientation was supposedly directed to increased manufacturing exports through significant price and subsidy incentives, distribution of investments revealed a declining trend for the sector. This non-conformity between the stated foreign trade objectives towards manufacturing exports and the actual patterns of accumulation away from manufacturing has been identified as one of the main structural deficiencies of the export-oriented growth strategy of the 1980s.⁸

7 In Table 1, the "outward oriented" sectors with export/production ratio above 30 percent in both periods are shaded in gray.

8 See Nurhan Yentürk and Özlem Onaran, "Düşük Ücretler Yatırımları Teşvik Ediyor mu? Türk İmalat Sanayiinde Bölüşüm ve Birikim İlişkisinin Analizi," in *Körlerin Yürüyüşü: Türkiye Ekonomisi ve 1990*

Figure 2a: Contributions to industrial productivity growth, 1980-1988

Source: Calculated from Turkstat, Annual Survey of Manufacturing Industries.

Figure 2b: Contributions to industrial productivity growth, 1989-2000

Source: Calculated from Turkstat, Annual Survey of Manufacturing Industries.

With this insufficient investment performance in manufacturing, the export-led growth episode of the 1980s seems to have generated sizable cost savings and surplus transfer to the recipient sectors, but could not generate sufficient contributions in productivity and employment. Lacking the necessary productivity investments for manufacturing exports, export gains based only on price incentives and subsidies had exhausted their impetus by the end of the decade.

As this unbalanced structure failed to generate the necessary accumulation patterns, the artificial growth generated by way of wage suppression and price subsidies was observed to have reached its economic and political limits by 1988. The 1989 policy maneuver of capital account liberalization paved the way for an injection of liquidity to the domestic economy in the form of short term foreign capital. Such inflows enabled, on the one hand, financing of accelerated public sector expenditures, and also provided relief of the increased pressures of aggregate demand on domestic markets by cheapening the costs of imports. Yet in the absence of an effective regulatory framework for the financial markets, the long-term effects of capital account liberalization were costly: the economy became extremely vulnerable to external shocks, and sudden outflows of foreign capital were instrumental in the eruption of the crises of 1994, 1999 and 2001.

For the Turkish economy, the 1989-2002 period was one of recurrent political and economic instability. Successive short-term governments dependent on the financial markets to offset escalating public debt contributed to the weakening of the regulatory capacities of the state, and its ability to manage the distributional conflicts which arose. Throughout the 1990s, financial institutions became a dominant faction within capital and were able to manipulate accumulation patterns.⁹

It is also possible to observe from Table 1 that the restructuring and large “swings” of the Turkish economy during the post-1989 “financial liberalization” period have generally mirrored the “boom and bust” cycles of industry as well. The difference in the growth rates of the sub-sectors of industry was now more emphasized, and the sectors became even

Sonrası Krizler, ed. Nurhan Yentürk (İstanbul: Bilgi Üniversitesi Yayınları, 2005); Şenses and Taymaz, “Sanayileşme Ne Oluyor?”; Erinc Yeldan, *Küreselleşme Sürecinde Türkiye Ekonomisi: Bölüşüm, Birikim ve Büyüme* (İstanbul: İletişim, 2001); Ahmet Haşim Köse and Erinc Yeldan, “Dışa Açılma Sürecinde Türkiye Ekonomisinin Dinamikleri: 1980-1997,” *Toplum ve Bilim*, no. 77 (1998).

9 Ziya Öniş and A. Faruk Aysan, “Neoliberal Globalization, the Nation-state and Financial Crises in the Semi-periphery: A Comparative Analysis,” *Third World Quarterly* 21, no. 1 (2000); Yılmaz Akyüz and Korkut Boratav, “The Making of the Turkish Financial Crisis,” *World Development* 31, no. 9 (2003); Fırat Demir, “A Failure Story: Politics and Financial Liberalization in Turkey, Revisiting the Revolving Door Hypothesis,” *World Development* 32, no. 5 (2004).

more differentiated in terms of the patterns of productivity and employment growth in this period; the average output growth of the industry in this period is recorded as 5.5 percent. Yet the *traditional* low-technology industries including (321) "Textiles and Apparel," (331&332) "Wood Products and Furniture" and (342) "Printing and Publishing" display much higher output growth rates. On the other hand, more inward-looking industries, including (353&354) "Petroleum Products" and (313) "Beverages," display negative growth rates.

During this period, almost 50 percent of all the sub-sectors of industry display negative employment growth rates. The sectors that displayed significant contributions to industrial productivity growth were those that also displayed decreases in employment: (314) "Tobacco industry," (331) "Wood and Cork Products" and (371&372) "Metal Industry" displayed (cumulative) growth rates of 74.2 percent, 717.3 percent and 51.9 percent in 1989-2000 respectively, while they displayed 46 percent, 24.7 percent and 29.6 percent respective reductions in employment.

It is during this period that we start identifying the effects of the Customs Union of 1996 and the prospects of the integration of the Turkish economy with European Union (EU) production networks. The sectors critical for the restructuring of the imminent post-2001 period displayed a differentiated pattern than the rest of the industry; the "medium and medium-high" technology sectors including "electrical machinery and apparatus," "motor vehicles industry" and "machinery and equipment" sectors displayed concomitant increases in both production and employment. These sectors are also among the sectors that significantly increased their exports/production ratios and contributed significantly to overall productivity growth (see Table 1 and Figure 2.b).

Post-2001: A period of break-off or an era of accumulated vulnerabilities?

The post-2001 period has been described as one of the major turning points for the Turkish economy. The growth rate of GDP, which had turned around from -3.7 percent in 1999 to 6.8 percent in 2000, underwent a harsh collapse to -5.7 percent in 2001. The resurgence of the economy out of the crisis was quite sharp: the average growth rate was 7.5 percent per annum between 2002 and 2006. After almost four decades of high and persistent inflation, price movements were finally brought under control through the post-crisis adjustment policies, reaching single-digit levels by 2005. The clear mandate to generate primary budget surpluses, reaching 6.5 percent of GNP, reduced the government debt burden to 34 percent (public sector net debt stock/GDP) in 2006, from a level of 66.3 percent in 2001.

The 2001 crisis has also undoubtedly transformed both the institutions and the economic policy environment of the Turkish economy. However, assessments regarding such changes vary: on the one hand, one would suggest that in an environment of low inflation, fiscal prudence and a sound financial system, Turkey's economic performance has improved significantly, paving the way for sustained growth. In terms of "sustained industrialization," such an assessment would also be supported by the fact that Turkey has been attaining large flows of foreign direct investment in this period. On the other hand, one can also argue that, despite rapid growth, a lower rate of inflation and the increased accessibility of foreign finance, Turkish macroeconomic circumstances have accumulated major vulnerabilities during the post-crisis era. High interest rates were conducive in keeping price movements under control, and at the same time guaranteed an adequate share for international portfolio capital. The prevalence of an over-benevolent international capital market, especially for developing economies since 2003, definitely facilitated an atmosphere in which the Turkish economy could grow at rates much higher than the domestic savings would have allowed. Now, however, the macroeconomic stability and growth potential of the economy are closely linked to the direction of international financial flows. Moreover, the most direct adverse effect of the surge in international portfolio flow over the post-2001 period has been felt in the foreign exchange market, leading to the oft-discussed overvaluation of the Turkish Lira.

One strong claim relates this structural overvaluation to the transformation of the production front of the economy. According to this claim, as traditional manufactured exports lose their competitiveness, the advantage of low-cost imports has contributed to the emergence of new production and export lines. Yet, being highly import-dependent, such lines have been tagged with low capacity to generate value added and employment.¹⁰

The question of whether there has been a restructuring of Turkish industries parallel to the transformation of the macroeconomic policy and the (new) global division of labor remains to be answered. The observation that the post-2001 period has been one during which Turkey has been more densely involved in cross-border production and trade networks is well documented, especially for certain sectors of the industry including (ISIC Rev3. 2 Digit-34) "Motor Vehicles" and (32) "Electrical Machinery and Apparatus."¹¹

10 See, for instance, Zafer Yükseler and Ercan Türkan, *Türkiye'nin Üretim ve Dış Ticaret Yapısında Dönüşüm: Küresel Yönelimler ve Yansımalar* (İstanbul: TÜSIAD, 2008).

11 Erol Taymaz and Kamil Yılmaz, *Integration with the Global Economy: The Case of Turkish Automobile and*

Table 2 illustrates the sectoral contributions to the overall trade balance of the manufacturing industry. Each sector is decomposed into (vertical) stages of the production process and the contribution to trade balance in terms of products produced in each stage is calculated for the years 1998, 2002, 2007 and 2009.¹² Tracing the figures for these years could also help one trace whether the sector has transformed its production technology over time.

According to Table 2, the sectors that display consistent (overall) positive contribution to the trade balance over the 1998-2009 period are (17) "Textiles," (18) "Textile products," (26) "Non-metallic Mineral Products," (25) "Rubber and Plastic products," (27) "Basic Metals and Fabricated Products" and (34) "Motor Vehicles." Except for "Motor Vehicles," which is classified as a "medium-high" technology sector, all these sectors are classified as traditional, labor-intensive "low" and "medium-low" technology sectors. In fact, among these "positively contributing" sectors, it is only the "Motor Vehicles" sector that has shown a significant transformation in its production processes. The sector's contribution was negative for all stages of production in 1998. Yet it can be observed that the sector has been gradually converting itself into one with positive contribution in the final stage of the production chain. The sector's contribution for the previous stages of the value-adding process, however, is still negative, indicating that Turkey has entered into the international network of production of "Motor Vehicles" specializing only in the final stage. There is no other sector among the "positive contributors" that indicates a significant transformation of production during this period.

It seems that Turkish industry in the post-1998 period continues to specialize in the production of consumption goods and is associated with deficits in intermediate goods production as well as the production of capital goods and primary goods. It is noteworthy that, from the point of view of a comprehensive evaluation of the post-1980 industrialization episode of the Turkish economy, the major exporting sectors of "Textiles" and "Textile Products" have continued to be final consumption good producing sectors without specializing in any of the previous stages of production.

Consumer Electronics Industries, Working Paper No.37 (Washington, DC: Commission on Growth and Development, 2008).

12 2002 is the year just following the crisis of 2001. 2007 is the last year before the outbreak of the global turmoil hit the Turkish economy. 2009 is a year in which we can observe the immediate effects of the global tumult. In the table, the sectors that have a (cumulative) positive contribution to the overall trade balance are shaded in gray, and the sectors that only contribute positively at the final stage of the value added chain are marked in bold type.

Table 2: Sectoral contribution to trade balance with respect to stages of production, Turkey, 1998-2009

| Sectors, ISIC Rev. 3 | Primary Goods | | | Intermediates-semi finished | | | Intermediates- parts and components | | | Final capital goods | | | Final consumption goods | | | All stages (2009) | |
|--|---------------|-------|-------|-----------------------------|-------|-------|-------------------------------------|-------|-------|---------------------|-------|-------|-------------------------|-------|-------|-------------------|-------|
| | 1998 | 2002 | 2007 | 2009 | 1998 | 2002 | 2007 | 2009 | 1998 | 2002 | 2007 | 2009 | 1998 | 2002 | 2007 | | 2009 |
| 15 Food and beverages | -0.49 | -0.61 | -0.22 | -0.15 | -0.46 | -0.60 | -0.45 | -0.69 | | | | | 0.35 | 0.16 | 0.15 | 0.18 | -0.66 |
| 16 Tobacco products | | | | | | | | | | | | | 0.08 | 0.11 | 0.06 | 0.09 | 0.09 |
| 17 Textiles | -0.02 | -0.01 | -0.01 | 0.00 | 2.77 | 1.35 | 0.97 | 0.79 | -0.02 | -0.02 | -0.02 | -0.02 | 7.89 | 6.99 | 3.77 | 3.39 | 4.18 |
| 18 Textile apparel | | | | | -0.04 | -0.14 | -0.02 | -0.01 | | | | | 9.88 | 8.18 | 3.85 | 3.08 | 3.07 |
| 19 Leather products | | | | | -0.08 | -0.16 | -0.06 | -0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 0.09 | -0.16 | -0.17 | -0.21 |
| 20 Wood products | 0.00 | 0.00 | -0.04 | -0.06 | -0.04 | 0.00 | -0.12 | -0.04 | | | | | -0.01 | -0.01 | -0.01 | -0.01 | -0.11 |
| 21 Paper and paper products | | | | | -0.75 | -0.77 | -0.83 | -0.91 | | | | | 0.04 | 0.13 | 0.17 | 0.22 | -0.69 |
| 22 Printing and publishing | | | | | 0.00 | -0.02 | -0.02 | -0.02 | -0.01 | 0.00 | -0.01 | -0.01 | -0.07 | -0.14 | -0.01 | -0.01 | -0.02 |
| 23 Coke, refined petroleum products and nuclear fuel | -0.73 | -0.99 | -0.71 | -0.80 | -0.06 | -0.07 | -0.08 | -0.10 | | | | | | | | | -0.90 |
| 24 Chemical products | -0.05 | -0.05 | -0.05 | -0.05 | -6.25 | -7.61 | -6.73 | -7.42 | | | | | 0.09 | -1.08 | -0.83 | -1.26 | -8.73 |
| 25 Rubber and plastic products | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.38 | 0.47 | 0.32 | 0.35 | 0.18 | 0.16 | -0.04 | 0.03 | 0.13 | 0.16 | 0.63 |
| 26 Non-metallic mineral products | 0.00 | 0.00 | 0.00 | 0.00 | 1.09 | 1.52 | 0.94 | 1.29 | -0.02 | -0.01 | 0.00 | -0.01 | 0.40 | 0.37 | 0.13 | 0.16 | 1.46 |
| 27 Basic metal | 0.00 | 0.00 | 0.00 | 0.00 | -0.30 | -1.56 | 1.57 | 5.75 | | | | | | | | | 5.75 |
| 28 Fabricated metal products | | | | | 0.25 | 0.33 | 0.81 | 0.97 | -0.12 | -0.35 | -0.17 | -0.27 | 0.08 | 0.06 | 0.30 | 0.31 | 0.10 |
| 29 Machinery and equipment, n.e.c. | | | | | -0.03 | 0.00 | -0.01 | -0.03 | -1.47 | -1.38 | -0.59 | -1.01 | -5.49 | -4.57 | -3.38 | -2.25 | 0.29 |
| 30 Office, accounting and computing machinery | | | | | | | | | -0.46 | -0.45 | -0.28 | -0.22 | -0.94 | -0.95 | -0.88 | -1.04 | -0.01 |
| 31 Electrical machinery and apparatus, n.e.c. | | | | | 0.61 | 0.65 | 0.17 | 0.13 | -0.52 | -0.62 | -0.30 | -0.47 | -0.35 | -0.39 | -0.70 | -1.10 | -0.02 |
| 32 Radio, TV and communications equipm. | | | | | | | | | -1.20 | -1.76 | -0.36 | -0.30 | -1.47 | -1.02 | -1.17 | -1.07 | 1.50 |
| 33 Medical, precision and optical inst. | | | | | -0.05 | -0.05 | -0.05 | -0.06 | -0.06 | -0.11 | -0.05 | -0.06 | -1.01 | -0.94 | -0.87 | -1.01 | -0.20 |
| 34 Motor vehicles | | | | | | | | | -0.84 | -0.27 | -1.30 | -1.15 | -0.58 | 1.37 | 2.21 | 1.52 | -1.38 |
| 35 Other transport equip. | | | | | | | | | -0.26 | -0.21 | 0.11 | -0.03 | -0.42 | 0.01 | 0.35 | -0.21 | -0.02 |
| 36 Furniture and other manuf. | 0.03 | 0.02 | 0.00 | 0.00 | -0.09 | -0.12 | -0.10 | -0.09 | 0.03 | 0.06 | 0.05 | 0.03 | 0.08 | 0.08 | 0.24 | 0.84 | 0.63 |

Source: Calculated from UN Comtrade Database.

Components of productivity growth in Turkish manufacturing: What does firm-level data show?

The analysis of structural change and productivity growth at the sectoral level could hide the turbulence and diversity at the firm level. Therefore, we have also analyzed very rich firm-level data to shed light on the components of productivity growth in Turkish manufacturing.

Table 3 summarizes the results of the labor productivity decomposition exercise using firm-level data for the Turkish manufacturing industry for the period 1983-2001. What the table first reemphasizes is that, parallel to the growth and recession cycles of the economy, the Turkish manufacturing industry as a whole demonstrates volatile average labor productivity growth rates. The average labor productivity growth rate was 6.1 percent in 1983-1988; it increased to 9.9 percent in 1989-1993 and then declined to 2.6 percent in 1995-2000. The bulk of growth in aggregate labor productivity is accounted for by the so-called *within effect*.¹³ The most important sub-components of the within effect were the change in intermediate input intensity and technical efficiency. During the 1994-2001 period, which was marked by abrupt boom and bust cycles, the manufacturing industry productivity growth performance was the poorest (the annual growth rate of real labor productivity was in the order of 1.8 percent on average).

13 The average productivity of a sector can change because of three factors: First, individual firms within the manufacturing industry could become more productive, and hence this component is called *within*. When one speaks about "productivity growth," it is usually implicitly assumed that firms have become more productive as a result of technological change, and, thus, the terms "technological change" and "productivity growth" are frequently used as synonyms. Second, changes in the composition (market shares) of sub-sectors (i.e., structural change) also determine average productivity and the rate of productivity change. This component is called *between* because it reflects the outcome of changes between sectoral shares. If more productive sectors increase their shares in total manufacturing (for example, if the automotive industry grows faster than the textile industry), then the average productivity will increase without any productivity change at all at the sectoral level. We further decompose the "between" component into two sub-components; inter-industry (changes in the market shares of sectors, for example, declining share of textiles, and increasing share of automobiles), and intra-industry (changes in the market shares of firms within sectors, for example, declining shares of less-productive firms, and increasing shares of more productive firms within the textile and automobile industries). Third, average productivity can change due to the entry and exit of firms. If new firms and exitors' average productivity is different from the market average, then entry and exit processes will lead to a change in average productivity. For example, if exitors (failed firms) are less productive, then the average productivity of the remaining firms will increase, i.e., "survival of the fittest" could increase average productivity even if there is no productivity growth at the sectoral or firm level. For further details of the method employed here, see Erol Taymaz et al., *Türkiye İmalat Sanayiinde Yapısal Dönüşüm ve Teknolojik Değişme Dinamikleri*, ERC Working Paper, No 08/04 (Ankara: Middle East Technical University, 2008).

Table 3: Sources of productivity growth in Turkey, 1983-2001

| Period | Contribution to labor productivity growth (%) | | | | | Total | Average annual growth (%) |
|-----------|---|---------|-------|-------|------|-------|---------------------------|
| | Within | Between | | Entry | Exit | | |
| | | Intra | Inter | | | | |
| 1983-1988 | 0.70 | 0.15 | -0.06 | 0.09 | 0.12 | 1.00 | 0.061 |
| 1988-1993 | 0.86 | 0.05 | -0.01 | -0.03 | 0.13 | 1.00 | 0.099 |
| 1993-1994 | -0.93 | -0.08 | -0.07 | -0.11 | 0.19 | -1.00 | -0.063 |
| 1994-1995 | 1.02 | 0.07 | -0.12 | -0.15 | 0.18 | 1.00 | 0.087 |
| 1995-2000 | 0.69 | 0.27 | -0.21 | -0.18 | 0.43 | 1.00 | 0.026 |
| 2000-2001 | -0.72 | 1.94 | -0.63 | -1.75 | 0.17 | -1.00 | -0.009 |

Source: Calculated from Turkstat, Annual Survey of Manufacturing Industries

The contribution of firm-level productivity growth (the within effect) to overall productivity growth was over 60 percent during the 1983-88, 1988-93 and 1995-2000 periods. The within effect has a significant negative contribution during economic crises as a result of a sharp decline in output and productivity. The intra-industry *between effect* also shows a positive contribution in all periods, with the exception of the 1994 crisis. The positive contribution of the intra-industry between effect implies that more productive firms tend to increase their market shares. Hence, the selection process among the manufacturing firms has played a significant role in labor productivity growth.

The inter-industry between effect has a negative contribution in all time periods, and its negative effect tends to increase over time. This finding suggests that, contrary to many fast-growing countries like Korea, the structure of the Turkish manufacturing industry has evolved towards less productive sectors during this period.

Except for the export-oriented growth period of 1983-88, we observe that the effect of firm entry is negative throughout the period. This indicates that entering firms have lower productivity on average. On the other hand, the exit effect is relatively strongly positive in all periods, leaving a positive net entry effect. It is possible to suggest that the selection process in the Turkish manufacturing industry has worked by eliminating less productive firms, especially since the 1994 crisis. The incidence of entry/exit episodes and their contribution to productivity growth increased considerably during the boom and bust cycles throughout the 1990s, with a declining rate of productivity growth.

In order to understand how the extent of firm heterogeneity (in term of size and ownership) contributes to the industry-wide result, the decomposition exercise was conducted for different categories of firms,

small and medium-sized enterprises (SMEs), large-sized enterprises (LSEs) and foreign firms. Large differences in the productivity growth rates achieved by these three groups are evidence of a substantial degree of heterogeneity among the manufacturing firms. SMEs have achieved, on average, the lowest productivity growth rates, whereas foreign firms have performed even better than large domestic firms in all but the 1988-93 period. Interestingly, foreign firms seem to be less flexible in terms of maintaining labor productivity growth rates than domestic firms, and they were hit the hardest during economic crises of 1994 and 2001.

Examining the elements of productivity growth for foreign firms and the SMEs, we observe that these groups differ considerably, both in terms of their labor productivities and in terms of the characteristics of their contributions to aggregate labor productivity growth. The contribution of SMEs to aggregate labor productivity was quite low (8 percent) during the 1983-1988 period. The contribution of SMEs to total productivity growth can be observed to have increased to 20 percent in 1988-1993 and 35 percent in 1995-2000. On the other hand, the contribution of foreign firms, which had been historically significantly higher than that of SMEs, continued to increase during the period. The contribution of foreign firms to aggregate labor productivity growth was 28 percent in 1983-88. Their role had increased to 32 percent in 1994-95 and to 39 percent in 1995-2000. Throughout the period, LSEs showed a constant reduction in their contribution to productivity growth. Such observations indicate that the productivity dynamics within different groups can be of completely different natures.

Structural change and integration with the world economy

The Turkish economy could be characterized as a typical agrarian economy until the Second World War. In spite of the industrialization drive of the 1930s, most of the population lived in rural areas, and agriculture accounted for about 85 to 90 percent of total employment. The processes of urbanization and industrialization gained momentum during the ISI era (the 1960s and the 1970s). As a result, the share of industry in total employment increased from only 8 percent in 1960 to 15 percent in 1980. Service sectors outperformed the manufacturing industry in generating urban jobs, and increased their share in total employment from 18 percent to 32 percent in the same period. Agriculture was not able to generate any new jobs from 1960 to 1980, whereas the bulk of urban jobs (about 4.5 million new jobs in total) was generated by services (70 percent of all new jobs), and industry accounted for about 30 percent of new jobs generated.

Yet the pace of industrialization, as measured by percentage points change in the share of industrial employment, was slow when compared to rapidly growing countries of the same era. For example, the share of industrial jobs increased by 6.1 percentage points from 1963 to 1980 in Turkey, whereas the same rate was 17.6 percentage points in Korea, although both countries started from almost the same level in 1963.

The performance of the neoliberal period in generating industrial employment in Turkey has thus been rather weak. Although urbanization proceeded during the neoliberal era at a faster rate than it had under ISI, the share of industrial employment increased only by 3 percentage points in the two decades after 1980, and additional 2.2 percentage points in the first decade of the third millennium, whereas the service sectors again provided the bulk of new jobs in urban areas. There is a marked difference between Turkey and the rapidly growing countries of East Asia in terms of the pace of industrialization. Turkey's industrialization process, left to be governed by "market" forces under neoliberal policies, seems to have actually slowed down, especially in the "lost-decade" of the 1990s. Thus, unlike the rapidly growing countries, Turkey has failed to establish a strong and diversified industrial base that could fuel rapid and sustained long-term economic growth, as observed in the cases of Japan, Korea, Taiwan in the post-war era, and China in the last couple of decades.

Structural change in manufacturing

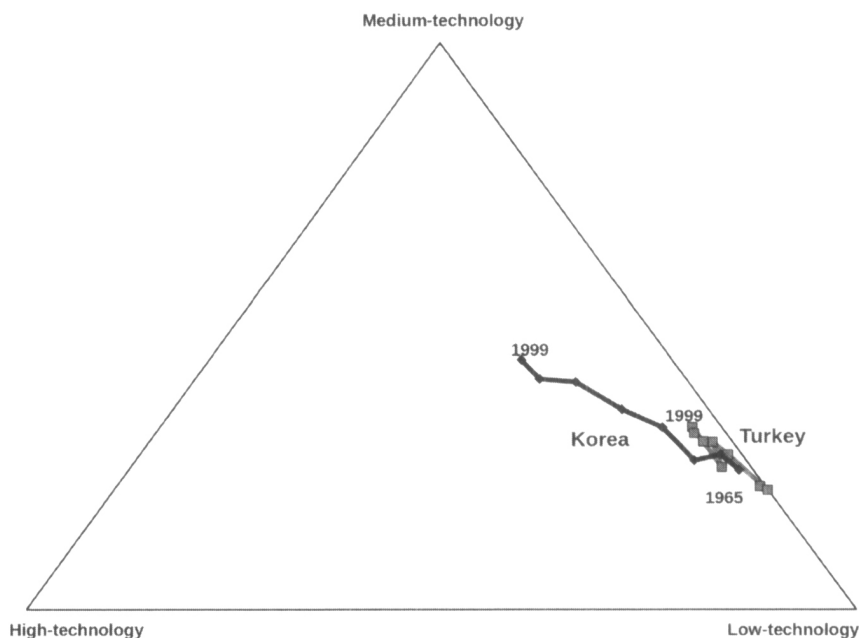
An examination of the structural change within the Turkish manufacturing industry could provide clues to the reasons for the relatively poor performance of industrialization.¹⁴ Following the OECD, manufacturing industries are classified into three groups by level of technology measured by the ratio of R&D expenditure to value added. Figure 3 depicts the evolution of industrial structure in Turkey and Korea since the 1960s. The figure is arranged such that the location of the country within the triangle shows the composition of manufacturing output by technology level. A country producing only high-technology products will be located at the bottom-left corner, whereas a country specialized only in the production of low-technology products will appear at the bottom-right corner. In other words, the distance from the high-technology, low-technology and medium-technology corners of the triangle measures the degree of specialization in these sectors. In the figure, the

14 Note that Turkey's industrialization performance was poor relative only to the *fast growing* countries. Compared to most of the developing world, Turkey has been quite successful in terms of industrialization and raising average income per capita.

data was calculated for 5-year intervals to reduce the effects of annual fluctuations, and the distance between two data points represents the degree of structural change in a 5-year period. Thus, the figure provides a visual presentation of the speed (the distance between two consecutive points) and direction of structural change from 1965 to 1999 in Turkey and Korea.

As shown in Figure 3, Turkey and Korea had a similar industrial structure in the mid-1960s: both countries were specialized in the production of low-technology products. Turkey had achieved fast structural change towards medium-technology products in the 1970s, but the direction of change reversed towards low-technology products in the first half of the 1980s as a result of the “export boom” generated by the export-oriented growth policies of the first decade of the neoliberal period. The manufacturing industry turned towards the medium-technology corner in the late-1980s, and moved in that direction at a declining rate in the 1990s.

Figure 3: Structural change in Turkish and Korean manufacturing, 1965-1999



Source: Calculated from UNIDO, Industrial Statistics Database.

Although the initial conditions look similar, the path and pace of structural change in Korean manufacturing was substantially different than the one followed by Turkish manufacturing. Korean manufacturing moved rapidly, without losing its momentum, towards the medium-technology and high-technology corners throughout the period (from 1965 to 1999),¹⁵ and Korea has now become an industrialized country specializing in medium- and high-technology products. The rapid pace of structural change in Korea, and its direction towards more productive sectors, are certainly a part of any explanation for the divergent experiences of Turkey and Korea.

Integration with the world economy

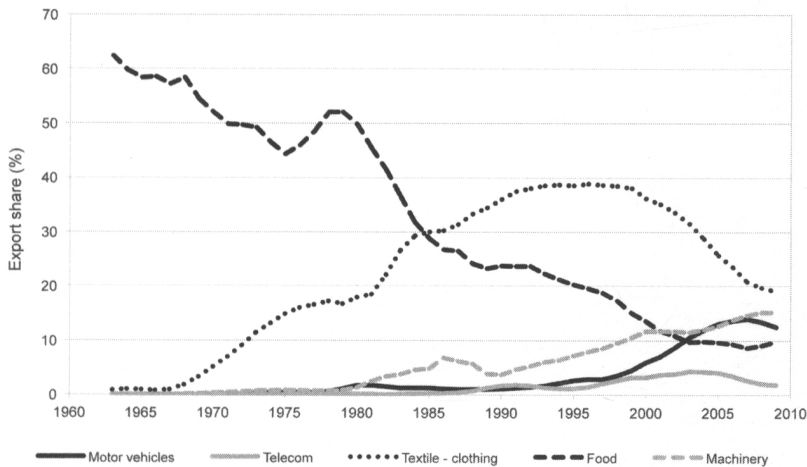
Foreign trade data reveals the mode of articulation with the world economy, because it reflects the pattern of specialization. A comparison of the structures of exports of Turkey and Korea provides additional information on how these economies have been integrated with the world economy, and how the mode of articulation has evolved over time.

The structure of Turkish exports for a selected group of products for the period 1963-2009 is shown in Figure 4a. Turkey's exports were dominated mainly by food (including agricultural products) in the 1960s and 1970s. Textile and clothing had become one of the main export-oriented sectors from the late 1960s, and these two products alone accounted for about 70 percent of export revenue in the late 1970s. Textile and clothing responded swiftly to the generous export subsidies of the early 1980s, and rapidly increased its share, becoming the largest export sector by 1985. Its share continued to increase at a lower rate until the early 1990s (almost 40 percent), when it finally began to taper off. The rise of machinery and motor vehicles since the mid-1990s has led to a sharp decline in the share of textile and clothing exports.

Machinery exports have grown consistently at rates higher than the aggregate rate of exports, and their share in total exports gradually but continually increased after the 1990s. The Customs Union with the EU in 1996 was a major export stimuli for a motor vehicles industry dominated by foreign firms. Motor vehicle exports and imports have both increased rapidly after the mid-1990s, and the sector has been one of the main exporters in the late 2000s, accounting for about 14 percent of total export revenue. It was hit hard by the global economic crisis in 2009, but recovered quickly in the following year.

15 The only exception is the 1997 crisis. The pace of structural change was slightly lower in the 1995-1999 period than in the previous periods under investigation.

Figure 4a: Structure of Turkish exports, 1963-2009 (3-year moving averages)

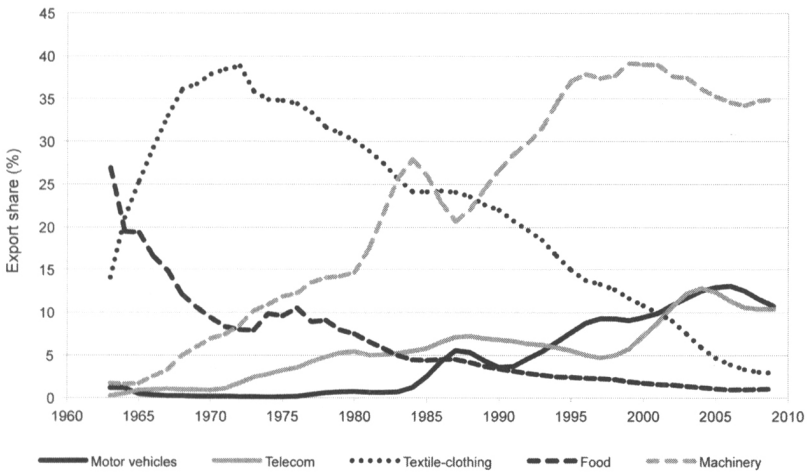


Source: UN, Comtrade Database.

Telecommunications equipment has been the main “high-technology” industry with a significant export share. Turkish exports of “telecommunications equipment” mainly consisted of consumer electronics, and particularly, cathode ray tube (CRT) TV sets. Thanks to the anti-dumping duties the EU imposed on CRT TV imports from the East Asian countries, Turkey’s CRT TV exports increased rapidly from 1995 to 2005. The industry lost its share in the EU market in the second half of the 2000s because CRT technology was being replaced by LCD and plasma technologies, and Turkish exports have been slow to adopt the new technology. The lack of technological capability and industrial base in electronics seems to be a binding constraint to further industrialization and structural change in Turkey.

By contrast, Korea experienced almost the same pattern of structural change in exports as Turkey did, but the timing and speed of the change was different (see Figure 4b). As in Turkey, food, including agricultural products, was the main export item from Korea in the early 1960s. Then, the share of textile and clothing increased rapidly, and reached its peak (about 40 percent) in the early 1970s, two decades earlier than in the Turkish case. Machinery exports grew faster than the average rate in Korea, and the share of machinery in total exports rose continuously

Figure 4b: Structure of Korean exports, 1963-2009 (3-year moving averages)



Source: UN, Comtrade Database.

from the early 1960s up until the late 1990s, and has become the leading export sector in the last decade, now accounting for about 35-40 percent of total Korean exports. Motor vehicle and telecommunications equipment exports from Korea increased in the 1990s and 2000s respectively, and the total share of these two products in Korean exports has reached 25 percent in recent years.

To summarize, one can suggest that Turkey and Korea followed a similar pattern of structural change in exports which can be divided into three stages: these stages can be characterized by the dominance of food and agricultural products, textile and clothing, and machinery (and to some extent motor vehicles). However, Turkey lagged almost 20 years behind Korea in terms of structural change in exports. Apparently, the structure of manufacturing output and exports in Turkey has changed towards the type of structure fading away in more developed countries, and its mode of articulation with the world economy has remained intact. However, the Korean case has been a remarkable success story of structural change and growth, because Korea has succeeded in changing its mode of articulation with the world economy.

Industrial policy and investment

Turkey and Korea had similar characteristics in the early 1960s: they were typical types of developing countries with small manufacturing bases, large rural populations, low literacy levels, and almost the same level of GDP per capita. Development policies adopted in both countries in the early 1960s seem to have been similar, too: they adopted planned development strategies in almost the same year,¹⁶ and implemented ISI policies to encourage industrialization. Finally, they both relied on an inward transfer of foreign technologies in the form of embodied technology transfer, foreign licensing, and reverse engineering, and foreign direct investment was not a significant source of capital and technology until the early 1990s. However, as seen in the preceding sections, they experienced divergent paths of development after the early 1960s.

There are two critical and interrelated factors that could explain a large part of the divergent patterns of growth in manufacturing in Turkey and Korea: investment intensity and industrial policy.

To begin with, Turkey and Korea both had low levels of investment intensity (the share of investment expenditures in GDP): in the first half of the 1960s it was about 11 percent in Turkey and 14 percent in Korea. (In the US, a capital abundant country, the share of investment in GDP was around 20 percent throughout the same period.) During the planned development period, investment expenditures expanded in both countries, albeit at a much faster rate in Korea, where investment intensity exceeded 35 percent in the early 1990s, declining to 30 percent after the 1997 Asian Crisis. Investment intensity in Turkey reached its peak in the 1990s, but it never exceeded 25 percent. It is a striking observation that, in spite of all the ups and downs in the investment rate in both countries, the difference between Korea and Turkey has remained around ten to fifteen percentage points since the early 1970s.¹⁷

Another major difference between Turkey and Korea is observed in terms of the way industrial policy is formulated and implemented. Although there are some similarities in the formulation of five-year development plans adopted in the 1960s and the 1970s, technology policy was an essential part of industrial policy in Korea, which strongly and systematically emphasized the transfer, acquisition and assimilation of foreign technology in the first two decades of the implementation of its plans.¹⁸

¹⁶ Korea and Turkey introduced their first Five-Year Development Plans in 1962 and 1963, respectively.

¹⁷ We use 3-year moving averages for investment rates to reduce the effects of annual fluctuations. The gap between Korea and Turkey widened significantly in the late 1970s and early 1990s in particular.

¹⁸ For comparative analyses, see Joong Hae Suh, "Development Strategy and Evolution of Korea's Inno-

As Korea started to expand its industrial base towards more sophisticated and complex products in the early 1980s, the policy makers realized the need to establish indigenous technology and research capability. Korea introduced the first National R&D Program in 1982 and took various policy measures to promote and facilitate private R&D activities. As a result, R&D investment surged upward, from 0.62 percent of GDP in 1981 to 2.4 percent in 1996 and 3.2 percent in 2006.¹⁹ For comparison, suffice to say that the share of R&D in Turkey was less than 1 percent even in 2010.

While Korea adopted new policies to encourage the accumulation of indigenous technological capabilities in the early 1980s, Turkey has followed an opposite policy path, and let the “market” decide the pace and direction of technological activities that are prone to market failures. Because of the lack of any systematic and consistent technology policy, and the complete elimination of public entrepreneurship during the neoliberal era, as a famous saying of the day declared, for Turkish manufacturing “there is no alternative” but to be a follower. Thus, while Korea has rapidly changed the structure of its industry and its mode of articulation with the world economy thanks to high levels of investment and the sense of direction provided by industrial and technology policy, Turkey has followed the direction dictated by its current position in the international division of labor.

Turkey and Korea had quite similar economic structures and conditions in the early 1960s, but have followed different and divergent patterns of growth in manufacturing. Our brief analysis indicates that differences in investment intensity and industrial policy could explain why these countries experienced different patterns of growth. It is thus legitimate to ask what explains these differences in investment intensity and industrial policy. Although it is beyond the scope of this paper to provide a thorough answer, the framework developed by Öniş and Şenses²⁰ can provide a useful starting point. As they correctly emphasize, reactive states like Turkey tend to “enjoy a much lower degree of relative autonomy from key domestic constituencies” and “their ability to overcome sectional conflicts and concentrate their attention on longer-term strategic goals such as developing internationally competitive export industries tend to be more

vation System,” in *Models for National Technology and Innovation Capacity Development in Turkey*, ed. Joong Hae Suh (Seoul: Korea Development Institute, 2009); Erol Taymaz, “Development Strategy and Evolution of Turkey’s Innovation System,” in *Models for National Technology and Innovation Capacity Development in Turkey*, ed. Joong Hae Suh (Seoul: Korea Development Institute, 2009).

19 Suh, “Development Strategy,” 33.

20 Öniş and Şenses, “Global Dynamics.”

limited.”²¹ However, proactive states like South Korea are able to formulate and implement longer-term strategies by solving the problem of coordination built in long-term investment activities, so that investment along the envisaged growth trajectory becomes profitable, and by mitigating conflicts among domestic constituencies through rapid economic growth.

As a typical example of a reactive state, the Turkish state during the neoliberal era was not able to conceive even the need for a systematic and long-term development strategy, and has accommodated itself to the pressures of foreign and domestic “power blocs” led by export-oriented industrialists in labor intensive industries in the 1980s, and big businesses trying to take part in international production chains supplying European markets since the early 1990s. In both cases, the domestic power bloc aimed at strengthening rather than changing its position within the existing international division of labor.

Conclusions

In this study we have portrayed the neoliberal industrial restructuring of the Turkish economy from a couple of perspectives: First, taking into account a selected set of critical indicators such as output, employment, exports and contributions to overall productivity growth at the sectoral and at firm levels, we compared the first two periods—1980-88 and 1989-2000—to identify the fundamental characteristics of the restructuring of Turkish industry. Next, in order to analyze the direction and pace of structural change in a relative setting, we discussed the mode of articulation with the world economy from a comparative perspective, and provided a brief explanation for the divergent patterns of development in Turkey and Korea.

Our analyses indicate that Turkey has been a successful follower during the neoliberal period. It has been successful in terms of increasing output (GDP) and productivity at a respectable (but not an extraordinary) rate over an extended period, and in achieving structural change in manufacturing output and exports, albeit at a slow pace, from the dominance of resource-intensive sectors (agricultural products and food) in the 1970s, to low technology industries (textile and clothing being the leading example) in the 1980s, and towards medium technology sectors (machinery and automotive) since the mid-1990s. However, Turkey has been a follower country in the sense that the structure of its manufacturing output and exports has never converged towards the one in more developed countries. In spite of all the changes observed in the Turkish

21 Ibid., 255.

economy, its mode of articulation with the world economy has remained intact, and the “market” (current relative prices) has been the main determinant of the path and pace of industrialization. In other words, Turkish industry has marched to the beat of a late drummer, and, therefore, has been a follower, ever trying to reach its moving target (the level and structure of output in more developed countries) without paying any attention to where that target moves on to.

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