The Look of Stagnation:
Romania's Erratic Transition

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Abstract: A transition path is expected to lead, eventually, to economic performance and sectoral *structure* typical of market economies. This twofold result would issue from a complex resource re-allocation process, almost automatically igniting a new mechanism of accumulation and growth. Romania's experience of persistent fluctuations around a descending trend, however, seems to contradict such notion of the one-way, self-fuelling path. It causes us to rethink some of the analytical tools and theories economists are using everyday. In this paper, I will offer the reflections of an academician together with, hopefully, some more practical suggestions.

My main point is that an analysis focusing solely upon resource re-allocation mechanisms cannot fully account for Romania's *erratic transition* because it tends to miss the link with the *dual* processes of accumulation and creation of new resources. I will, therefore, reconstruct the "other side" of Romania's story by looking at its *dynamic structure*, described by the distribution of the economy's sectoral paths. The evolution over time of such distribution is the key to understanding the two issues of macroeconomic vulnerability and the non-sustainability of the country's current situation.

Thus, the dynamics of Romania's economy is treated as a specimen of an independent *variety of transition*. It is one that not only proves unable to initialise and then sustain long-term growth; it seems to actually absorb and destroy more resources than it creates, in this way generating a slow agony from time to time interrupted sudden bursts of activity. The term *dynamic trap* is meant to describe such a repeating pattern of wild fluctuations around a contracting trend.

Due partly to the short time horizon and data availability, the conclusions of the foregoing analysis can only be tentative. Still, they clearly point out the need to re-consider policy for Romania and similar countries. In particular, measures are required to put in place and to enhance mechanisms of technology transfers, to re-orient sectoral composition that generates trade specialization, and generally to create conditions for an accelerated process of accumulation of physical as well as human capital assets. The economic environment in such countries seems unable to process macroeconomic policies in the expected way.

The Dangerous Mix

In this paper disaggregated analysis, in general, stops at 1998[1], but aggregate data often cover a longer time span. The most recent figures of Romanian performance, however, do not seem to alter the general picture. Romania is experiencing a slow-down of the recession began in early 1997, but one cannot talk of a clear upturn, yet. At this point, it seems to be only a new phase in its growth cycle.

In fact, the macroeconomic scenario of the last two years is rather mixed. In 1999, real GDP is reported to have fallen by 3.2% below the 1998 level, but industrial value added seems to have increased by 3.1% and gross capital formation by 10.8%. Performance seems to have improved in the year 2000: gross fixed capital formation is up by 8.7%, industrial output and GDP have been increasing too. Unemployment data, on the other hand, have shown a steady deterioration since 1997, but the end of 2000 official rate has dropped from 11% to around 10% and it seems to be stable around this figure. An increase of exports and a simultaneous imports decrease were registered during these two years; they were the joint result of a steadily contracting domestic demand and of the 1999 depreciation of the Lei. However, the trade balance at the end of year 2000 did not show any improvement, for imports eventually caught up with exports, inflation having

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[1] All data are officially released figures by the Central Statistical Office and they appear in the Statistical Yearbooks and its updates for the last two years.

practically eroded competitiveness. FDIs in Romania, already the lowest in the transition countries, have dropped dramatically.

At a closer look, the sequencing and the mechanism driving the current phase appear to be similar to the one that produced the short-lived expansion in 1993-96. There is an output expansion, initially confined to certain industrial sectors, triggered by an increase in exports, which is due to a temporarily favourable real exchange rate. This expansion wave becomes diffused throughout the economy and temporally protracted by a pre-electoral political mechanism, which adds a boost to domestic demand by lax wage and employment policies but, at the same time, it rekindles inflation. Exports expansion eventually slows down as a result of the erosion of international competitiveness, but more, politically inspired measures extend the agony a little longer by progressively replacing foreign with domestic demand. The domestic situation becomes increasingly unsustainable. If there is something to be learned from the previous experience, post-election days in the winter of 2000-1 will see an abrupt end to all this, once again. If this *prediction* were to be true, it would show that the current expansion, like the previous one, does not indicate new positive opportunities for the country. The similarity between the two episodes would demonstrate, on the contrary, that Romania is stuck *somewhere in the middle of the transition*, its economic and productive structure having only slightly changed from the one inherited from the past.

Romania's vulnerability to this *dangerous mix* of an unstable foreign demand and similarly erratic domestic shocks (generated by a *political cycle*) will continue as long as two conditions will persist: that is, its international competitiveness will be solely based upon lower labour and energy costs; and the domestic market will be structurally depressed. The latter is due to the levels of unemployment, which are certainly higher than reported by official figures, and in general to the unprecedented poverty, which affects as much as 41% of the population.

The continuous fall registered in domestic demand at a rate of 4% per year since 1997, has been partially counterbalanced by the employment and wage increases in the broadly defined public sector (including state owned firms) that the approaching election period has seen. Improvement of such situation, *per se*, would not automatically imply a cure for the country's vulnerability, of course. However, it would create a stronger backbone on which to lean, whenever the international demand moves away, as it often does for Romania. The volatility of the latter stems from the particular type of comparative advantages of Romania, which specialises in production lines with generally low value added and low technology content, and therefore it has no niche in the international specialisation. Thus, competition from other poor countries is fierce and Romania's competitiveness is ephemeral, as it relies upon differentials in unit costs (of labour and/or energy or raw materials) that can only be temporary. Consequently, the country has no capability of converting international demand into an engine for growth in the long run. So far, it has not been accumulating anything of that sort.

The *twofold weakness* depicted above contributed to a macroeconomic performance, which, for its erratic nature, has appeared a-typical with respect to other transition countries. Such performance, however, eventually descends from the lack of a strong and dynamic productive structure, rather than from the nature of the exogenous and domestic shocks. Transition inherited from the past a production structure that was highly polarised and, being oriented to the domestic market, was ill suited to an economy opening to the international markets. A new, modern structure has not been created during the transition process up to now, and the country did not catch up with the long technological stalemate of the 80's, which was a key feature of the initial conditions of its transition in comparison to other countries. The (effective) demand problem in the twofold form outlined above is strongly interlocked with a severe accumulation problem, which deserves more

attention than it has received so far. The analysis of the latter leads to a comparison with other transition countries, where an *investment puzzle* (Blanchard, 1997) seems to arise.

Again, if it is true that we are now witnessing a rehearsal of the mid 90s events, the country is in a sort of *dynamic trap:* not a static equilibrium, but an irregular, shock-induced oscillation around a contraction trend. There is no ready-made recipe available to escape from such dynamic trap that is in a sense a novelty in the transition panorama, but something can be said about its ingredients once the problem has been better understood.

The main thesis in this paper is that the two key issues of *macroeconomic vulnerability* and *un-sustainability* are closely related in Romania's dynamics. While the former shows up in wild responses to positive shocks, and the latter has to do with the country's trend, still they cannot be really disentangled from one another. They result from the one and the same mechanism and, therefore, demand a unique explanation. As other countries in South-east Europe seem to display similar behaviour, there may be more than one transition pattern to be recognised and, correspondingly, distinct transition clubs. If so, it is likely that an explanation for Romania's dynamics will serve such other countries as well.

Transition paths are expected to generate certain structural changes that lead towards the "normal" or long-term growth of the more advanced countries, a persuasion that is often implicit in the literature. There is little evidence that this has been happening in Romania, and actually, the evidence seems to point in the opposite direction. This gives the clue. This paper traces the roots of those two key issues in the relation between the sectoral and the dynamic structures of the economy in transition, and their parallel evolution.

Therefore, from Sect. 3 onwards, the analysis focuses upon the link between aggregate performance and sectoral structure, with the corresponding dynamics of capital accumulation (and technological change), innovation and employment. There, the key feature, which can only emerge from a more disaggregated framework, is the diversity of performance *across sectors*, but also over the *phases* into which Romania's transition has to be articulated in order to understand its peculiar features[2]. The motivation for such alternative, though complementary, approach is in Sections 1-2. These reconstruct the explanation of Romania's path that can be reached with a more standard framework.

The general conclusion of this paper is that any analysis of Romania's and similar transition paths, which only looks at the resource allocation processes, is going to be incomplete if not misleading. Such processes do take place, of course, still they do not re-set the economy on the desired growth path, and we have to explain why.

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[2] Technically speaking, the framework deployed in this paper makes a heuristic use of a mathematical model called "multi-phase dynamics" (Day (1994)), or "multi-regime dynamics" (Punzo (1995); Boehm and Punzo, various papers). This focuses upon the dynamics of a set of dynamic paths, associated with different sectors and/or countries. The notion of a distribution dynamics, however, has also emerged in the growth empirics literature and in particular in the discussion of *convergence*, catching-up and growth clubs, with reference to cross-country distribution of per capita income. In the application of this paper and elsewhere, distribution dynamics is generalised to a two-variable model. The notion of a *dynamic structure* as a mix of interdependent sectoral paths was introduced by Richard M. Goodwin. It allows us to focus upon that shock-propagation mechanism which is normally simplified in current model building. The relationship between multi-regime dynamics and symbolic dynamics is discussed in a paper by Brida, Puchet and Punzo (2000).

1. The ideal transition?

After ten years of transition experiences, one is entitled to ask what we learned about them and, in particular, whether there is such a thing as a *typical transition*. Some are actually inclined to think so. Thus, *a transition path* would be characterised by a U-shaped response curve for aggregate
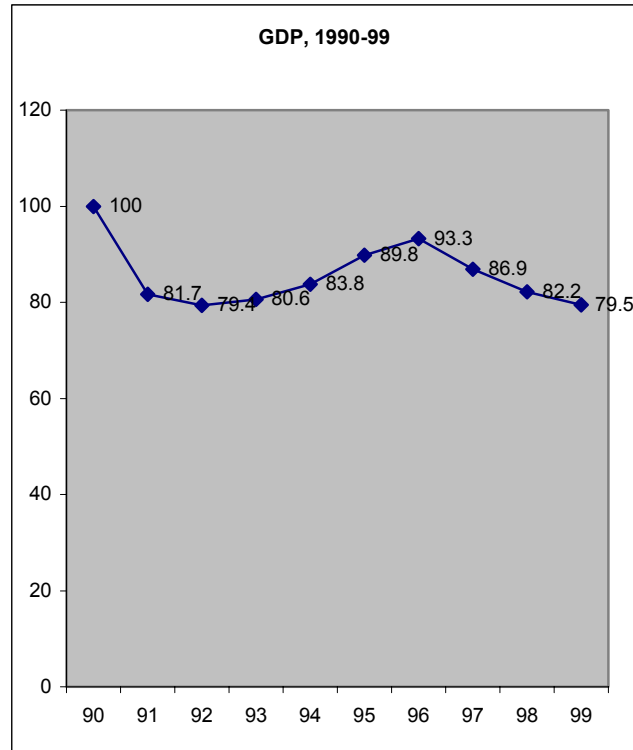
GDP, 1990-99

Fig.1.1

real output, falling immediately after the institutional change, taking some time to recover to its pre-transition level but eventually starting to grow in earnest[3]. Transition recession would, therefore, be a *transient phenomenon* while moving from the old to the new equilibrium path: the smoother growth of the market economies. The contraction becomes a sort of anomaly, conceptualised as the necessary "transformational recession" (Kornai, 1994).

The best illustration of this story is Poland, whose *real* GDP dipped to a minimum around 1993 and has returned to its pre-transition level already in the middle of the '90s. The upswing has continued ever since, and the country seems to be done with transition and be set for fairly steady growth. Other countries seem to have gone through the same sequence, only with different timings for troughs, and different transition speeds. It is the latter fact that has attracted much attention, for its obvious policy implications.

But Romania's experience undermines the very notion of the temporary response during the path to a new unique equilibrium. Fig.1.1 shows, first of all, that the real output response is quite different, looking more like a slanted W than a U, so that, for instance, transition speed cannot

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[3] Blanchard (1997).

even be defined. Of course, one finds the initial contraction. In the middle of the 1990s, around the end of 1993 and roughly at the same time as Poland and other countries, Romania too experienced an upswing of a sort. But it was not as equally strong (even the 1995 peak is still located well below the official pre-transition figure). Moreover, it was quickly exhausted, and output started falling again. By 1998, it was some 20% below the 1990 level. During the last eighteen months or so, some indicators have begun to show a slow down of the recession begun in 1997, and perhaps an upturn. Still, according to official figures, output is well below its previous peak value and in any case it has not yet recovered the 1990 level. Transition is not over, yet[4].

The expansion in 1993-6 is a key part of this story, which would otherwise be simply of a steady contraction. A candidate explanation for such episode is the coincidence, not entirely fortuitous, of a set of conditions favourable to a temporary boom of the economy but of a short life. Expansion was initially stimulated by a positive external shock: an expansion of foreign demand for certain industrial products. On the other hand, this was triggered by temporary conditions of competitiveness: internationally lower unit labour costs in certain light-weight production lines and low energy costs, due to state subsidies, in heavy-weight, generally state-owned industries. These latter firms were an inheritance of the past regime that the government did not want to let go bankrupt nor privatise as socially important for their relevant employment shares. The former ones, instead, were an assorted lot of privatised and new private firms, together with state-owned firms of different sizes, all specialising in such products as textiles, footwear and apparel (fundamentally transforming to the final stage of production largely imported materials) or furniture and related wood products, that rely upon local raw materials. But all of them share the fact that they take advantage of the abundance of cheap unskilled labour. At the beginning of 1996, the impulse from the positive external shock had already expended its impact on the industrial sectors, as a result of the erosion of the international competitiveness connected with a high price and wage inflation. Still, the expansion was propagated to other sectors and further extended by the boost to domestic demand resulting from wage and employment increases in the public administration and the state controlled sectors. These were determined by politically contingent conditions. Autumn 1996 was an electoral season. The strict reform program launched by the new government as soon as it came into power in early 1997 brought the play to an abrupt end[5]. The recession that had to come at the end of the export boom eventually began.

Likewise, the 1999 devaluation of the Lei has helped to stimulate foreign demand and generate an export expansion, which has improved the trade balance in the presence of a sluggish import reaction from a steadily contracting domestic demand. But the real exchange rate has been deteriorating ever since, though quite slowly, as a result of the inflation process, thus eroding the international competitiveness of Romania's exports. In fact, the political difficulties of the government to face the impending elections of autumn 2000 seem to have again induced a more relaxed policy as for wages, employment and needed structural reforms. The combined effect has been to soften the general contraction in the levels of activity, and thus to contribute to produce the observed reversal in the rates of growth.

I believe that the 1993-96 and the ongoing expansions well illustrate the *impulse-propagation mechanism* of elementary textbooks of economics. It is also useful to think in these terms. Something moves in the economy only when, and if, massive doses of shocks (e.g. of *drugged* demand) are administered. But once the exogenous impulse, or the chain of dovetailing impulses, has exhausted its effects, the economy relapses into its previous equilibrium. It is in the lack of the capability for self-sustained expansion that lays the real difference between Romania's experience and that of the successful transition countries. Therefore, on one side, fluctuations are

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[4] WB bulletin, October 2000.
[5] My interpretation is consistent with the one presented in the OECD (1998) *Economic Survey on Romania*.

neither fortuitous nor unique events as erratic responses to equally erratic shocks; rather, they seem to belong to the pattern of Romania's transition. On the other side, the long run equilibrium path seems to be one of contraction rather than growth. This can only happen because the structure of the economy, the *propagation mechanism*, is unable to convert positive shocks into a self-fuelling engine of growth. The explanation of Romania's erratic performance lies in the characteristics of its structure, not in the shocks.

Why does this happen? How are contraction and fluctuations coupled with one another? As dynamics is similar in some neighbouring countries in South East Europe[6], Romania is not the exception in an otherwise orderly distribution of countries around the *ideal transition*. Transition paths can, apparently, take up a variety of shapes.

2. Structural change as re-allocation of resources

A successful transition is told as a tale of a manifold process of structural change induced by massive resource reallocation. There is a fall in output and demand, and a progressively increasing unemployment due to labour shedding during the initial phase of restructuring, privatisation of state-owned firms and generally the downsizing of the state-controlled economy that is not yet being compensated by the expansion of a new private sector. This is followed by the recovery of output due to new and higher efficiency levels combining with the birth of new private firms. Eventually, this process generates enough input demand as to begin to re-absorb unemployment and to create new jobs. In other words, there is a twofold process: massive labour re-allocation, from state-owned to private firms, and across productive sectors, and re-proportioning among the main activities in the economy (agriculture, industry and services). Together, these two ignite growth on a new path.

There is, in the economic literature, a sort of checklist of stylised facts for these success stories[7]. Window #1 summarizes the corresponding evidence for Romania. What comes out immediately from a comparison is that most tendencies seem to be the same, though sizes are often dramatically different. On the whole, what is really different from the checklist is that, even for the more disaggregated variables, the U-shape is uniformly replaced by the slanted W-shaped oscillation observed in aggregate output.

For instance, going over some of the details, both Industrial and Manufacturing output levels in Romania, too, display a tendency to grow less than GDP, and therefore their shares in the latter are diminishing[8]. The widening of the gap between GDP and Industrial output is generally taken as evidence of a permanent shift of resources (labour shed by the state owned factories and migrating towards the new Trade and Services Sector), and therefore of the accomplishment of a structural change. This picture is well appropriate to Poland where total as well as manufacturing employment levels fell steadily until about '96-97, employment declining more rapidly in manufacturing than in general industry. In comparison, the Czech Republic had a softer approach,
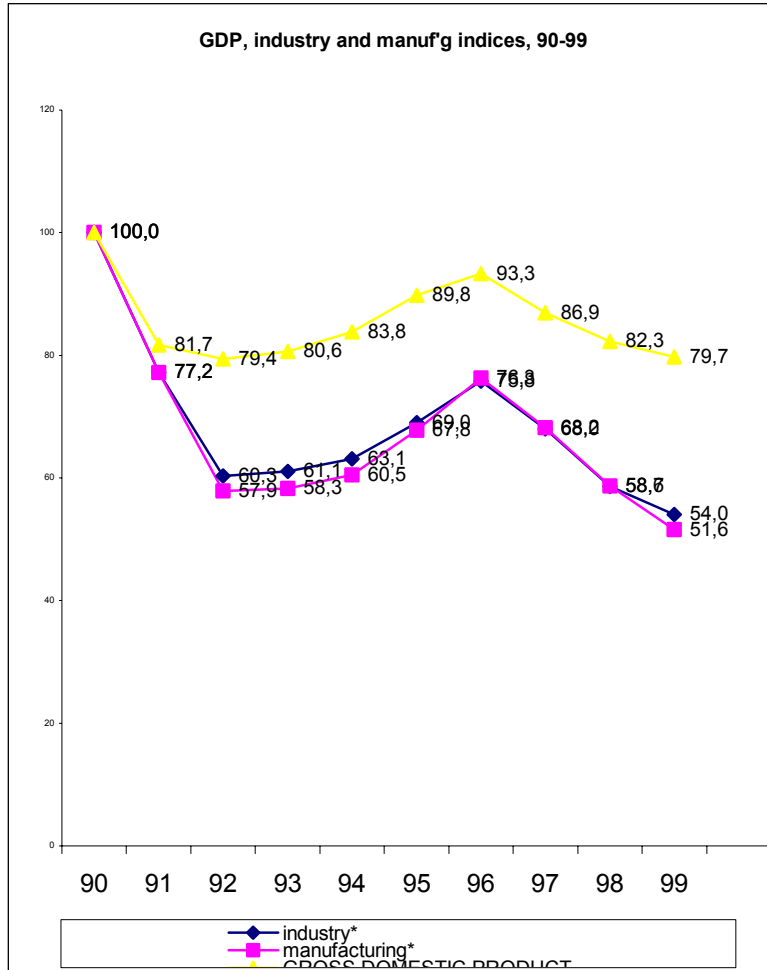
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[6] This is recognised in the World Bank publication: *The road to stability and prosperity in South Eastern Europe: a regional strategy paper*, March 2000.
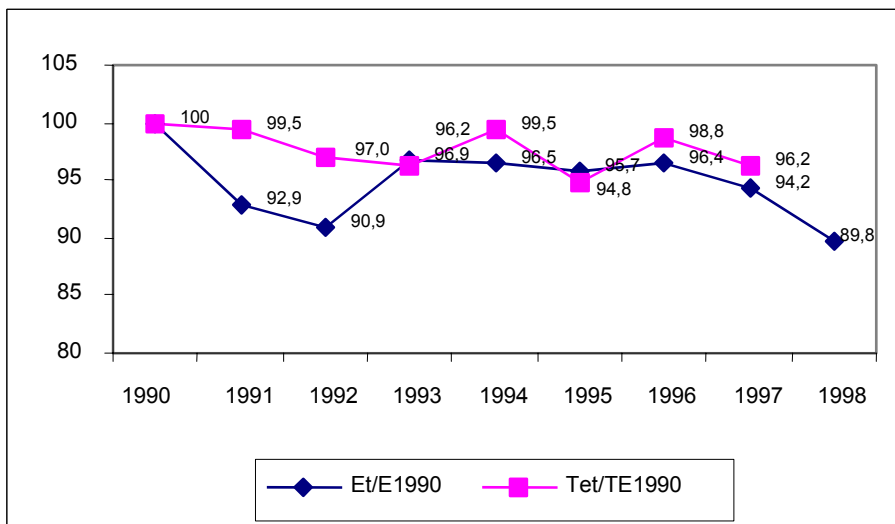[7] Blanchard (1997) is the reference source I am using hereafter.
[8] In comparison to other countries, Romania's recession was definitely worse. The fall of manufacturing and in general, industrial production was definitely greater than the loss in GDP during the 1990-92 recession (- 42% and -21%, respectively), and it compares with losses of 32% and 18% for Poland, 36% and 22% of Slovakia (the worst wrangler during that same recession). Later, Romania's figures picked up some speed and started some expansion.

with aggregate employment loosing only 8% of its pre-transition level and soon recovering, at least until the 1996 exchange rate crisis. For both countries, however, there is reason to believe that the re-sizing of the shares of manufacturing output and employment in their aggregates, has indeed contributed to the trend of positive growth by favouring higher value added businesses.
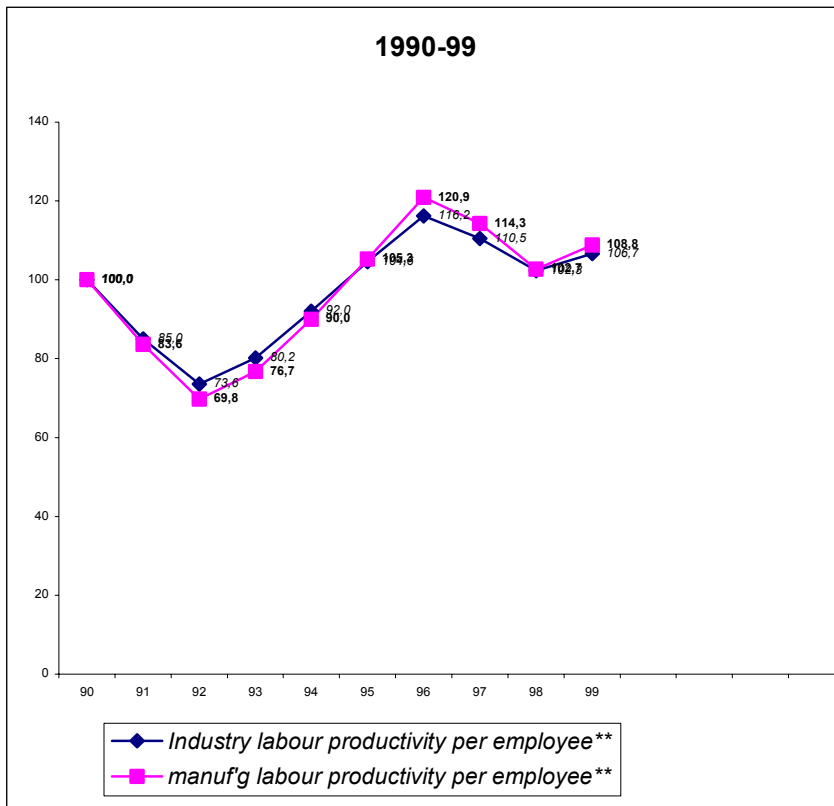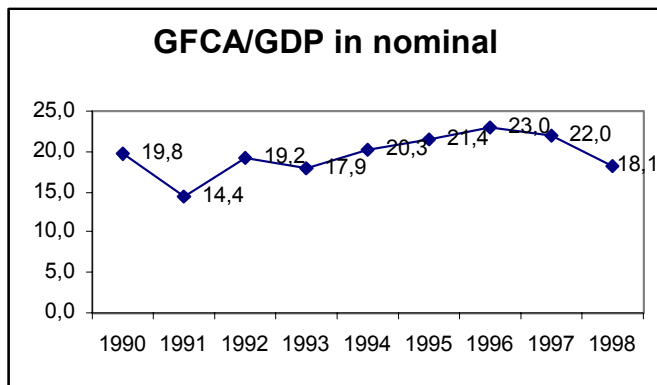
Window 1

GDP, industry and manuf'g indices, 90-99

W 1.1

W 1.2

1990-99

Legend:
- Industry labour productivity per employee**
- manuf'g labour productivity per employee**

Data points (Industry): 100,0 (90), 85,0 (91), 73,6 (92), 80,2 (93), 92,0 (94), 105,3 (95), 116,2 (96), 110,5 (97), 102,3 (98), 106,7 (99)

Data points (manuf'g): 100,0 (90), 83,6 (91), 69,8 (92), 76,7 (93), 90,0 (94), 105,8 (95), 120,9 (96), 114,3 (97), 102,3 (98), 108,8 (99)

W 1.3

GFCA/GDP in nominal

19,8 (1990), 14,4 (1991), 19,2 (1992), 17,9 (1993), 20,3 (1994), 21,4 (1995), 23,0 (1996), 22,0 (1997), 18,1 (1998)

W 1.4

The picture for Romania reproduces the wave-like evolution of its macro-indicators *but* it also shows a declining trend in output levels in all sectors but Agriculture. In the aggregate, both *dependent* and *total employment*, which remained close to the 1990 level from 1993 to the end of

1996, have been falling ever since, with a slow down of this process and a temporary stabilisation at the end of the year 2000. There too, dependent employment in Manufacturing has indeed steadily decreased and, actually, the relative contraction of manufacturing as a share of total employment is the greatest in Romania, compared with the countries considered above.

Of course, diverging output and employment paths imply a dynamics of labour productivity. In other transition countries labour productivity generally falls during the early phase in the recession due to a fall of output that goes together with cautious labour hoarding, while in a second phase labour shedding from state-owned firms is realised in earnest, as part of restructuring and privatisation programs, and output begins to rebound. This increase in labour efficiency is then strengthened as the private sector expands with the creation of new competitive firms, disciplined by the emerging markets. Now, labour productivity in Romania's Manufacturing declines all the way down to 70% of the 1990 level (which is the worst level of all countries, including Bulgaria), to recover later and reach into the 120% at the end of 1996. The historical minimum was attained around a 1993 short-lived employment expansion. Before, productivity and employment have been falling together, an expected association induced by the general disarray of the economy. After 1993, their diverging paths indicate that employment restructuring and labour shedding were indeed bringing about productivity gains that show up in economy-wide figures as well. Still, the early fall in labour productivity appears to be more drastic than elsewhere, and the recovery is at a lower level. What is really noticeable, though, is that its pace in e.g. Manufacturing reproduces the fluctuation of aggregate output, and it has been basically descending since 1997. In the countries of the successful club, on the contrary, labour productivity seems definitely set upon a path of fairly steady growth. To me, this indicates that it is not clear what have been the real efficiency gains for Romania of this generalised process of labour restructuring.

Turning to capital accumulation, Romania's figures for the ratio of Gross Fixed Capital Formation to GDP seem to show values and stability comparable to other transition countries[9]. More recent data indicates a dramatic fall of that ratio from 19.5% (the first semester '99) to 16.5% (same period of 2000) and lower. Still, Romania's record has been for most of the time in line with that of members of the successful club. The problem is already *within* the club, however. The Czech and Slovak Republics, with relatively higher GFCF-to-GDP ratios, had a poorer productivity performance than Poland and Hungary. For Romania that ratio is about as low as in Poland; performance in terms of labour productivity, on the other hand, is poorer than in the Czech Republic. And this has to be added to its already noted high variability. Capital accumulation does not seem to explain productivity performance in the successful club, but it may explain it for Romania. This might be a puzzle inside the puzzle. The solution of the *investment puzzle* should be therefore addressed in earnest.

If a transition path is a manifold process of adjustment to a new equilibrium, then, its final outcome is expected to have quite important *qualitative* or structural features. This is often expressed in terms of what can be called the *sectoral structure* of the economy. Thus, the mix between the three *main activities*, Agriculture, Industry and the Service Sector, are expected to exhibit a recognizable tendency to converge to the proportions exhibited by OECD's more advanced countries. It is one such sectoral structure that apparently can support a similar growth path.

Before the long run equilibrium proportions get realised, a progressive size reduction of Agriculture and Industry would, normally, be matched by an equally increasing relative size of the Services Sector broadly defined. It appears that transition countries in the successful club performed

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[9] It is in nominal terms. I am assuming the deflators to be roughly the same, an assumption justified by the behaviour of the price indices published in the Statistical Yearbook.

satisfactorily also in this respect. But in Romania, after the initial partial increase, there was a stalemate of the Service Sector in terms of both output and employment shares; the shares of Industry in output and employment fell sharply. *Instead,* Agriculture increased sensibly employment (by as much as +36%), absorbing much of the labour force expelled from Industry. Sectoral output followed suit, but not at a comparable rate, thus generating a strong negative effect on productivity. *Such employment shift towards Agriculture seems to be a new and stable structural feature.*

Thus, new and unexpected equilibrium proportions among sectors seem to have already emerged in Romania. Agriculture's *relative weight which, however measured, is greater than it should be, tends also to be stable around the higher values produced during the transition*, while it exhibits a counter-cyclical variation phased in with Industry. In other words, instead of downsizing both of them at the same time, the resource reallocation process induced by the transition has created a novel mechanism of interlocking between Industry and Agriculture. This freezes their shares in output and employment as long run averages, but it allows shorter-term fluctuations. Left out of this game is precisely the Service Sector whose largely physiological initial expansion, with the promise of high value added and productivity growth, did not continue for long. Thus, it may be reasonably argued that the source of Romania's problems lies precisely here. Steady expansion did not start because structural change as sectoral re-proportioning took a totally unexpected turn. Still, we have to explain why this happened.

A twofold lesson can be drawn from this checklist exercise. Behind the transition path as we see it in aggregate figures, there is a *complex process* that can shape up different kinds of structural adjustments at the level of the productive structure. Its outcome is far from certain because resource re-allocation is itself a dynamic process, which can yield stable as well as unstable allocations and corresponding sectoral structures. Romania illustrates this possibility. The dynamics of growth will vary accordingly, and, indeed, not all allocations are capable of generating growth.

The trend of steady downsizing of the Romanian economy can surely be attributed to the increased relative weight of the less dynamic components of the economy. However, this became possible because neither the initial recession nor the ensuing expansion accomplished what they should have accomplished. Capital accumulation and the related technological advance had been frozen over the last 10 years of communist rule, leaving a sectorally unbalanced and obsolete capital stock in disastrous conditions for lack of proper maintenance. The mid-90s expansion presented the opportunity of carrying out a much needed, major overhaul of the sectoral composition and relative strengths of the productive basis, and the updating of its capacity. That opportunity was not seized. Romania's Gross Fixed Capital Formation displays the omnipresent W-pattern, resulting in a yearly average rate of only .02%. There is, thus, a practically stationary trend over the period 1990-98 and a clearly worsening performance in the last three years to date[10]. This continues a history of GFCF that shows expansion to the middle of the 80s but a downward trend ever since.

In the new conditions of a relatively open economy, with an embryonic market system in place, all this could only increase the country's productive fragility. The presence of structural employment buffers, temporarily stabilising the economy, may only have increased, in the long run, its tendency to fluctuate by procrastinating otherwise urgent surgical operations.

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[10]The situation has been steadily deteriorating till the year 2000, whose suddenly positive growth confirms the strong pro-cyclical behaviour and therefore volatility of investment.

3. Transition of diminishing expectations

Transition seems to eventually deliver self-sustaining growth only when it brings about change of a more qualitative nature and of a particular brand: creating a newer, modern productive structure. The abortion of such process must be, therefore, at the root of Romania's known problems. Whence its trend of contraction in all aggregate and sectoral indicators, which is only softened, not altered, by seemingly erratic fluctuations. One realises how real is the danger for one such economy, of ending up looking like an underdeveloped country.

That a production structure be, essentially, a resource allocation with a corresponding mix of activities, is what comes immediately to an economist's mind. Implicitly, she assumes that the processes, by which new resources are created while older ones are being destroyed, will be activated automatically. They are thought of as by-products of the working of that same mechanism unfolding along a standard pattern. New firms are created and old ones manage to survive if they are restructured, new machinery and plants are bought up for the purpose, new products designed, new production lines replace the existing ones. Market surveying and marketing are began by smart opportunity seekers.

What is happening in Romania, however, can be taken to show that the re-allocation mechanism may, sometimes, destroy more resources than it creates. Perhaps more than elsewhere, there was scope for the fast growth that is normally associated with *catching-up* phenomena. Why contraction, instead? What is amiss?

We have outlined above the scenario of resource reallocation. The conventional view of a transition path, as we have seen it above, is fairly simple: it is made up only of a description of the macroeconomic performance and of the corresponding *sectoral structure*. It should be clear, now, that something more is needed to really track it down. *The dynamics of Romania's structure* is missing. *Transition pattern* seems to be a better term to indicate the sequence of structural transformations underlying *one such* path and determining its qualitative features: e.g. where it leads, how it qualitatively affects the production structure, whether it gets articulated over time and/or across sectors smoothly or through oscillations of different size. To get such *pattern*, the conventional view needs to be integrated with an analysis of the processes of capital accumulation, technical change and innovation as it is realised across producing sectors. Thus, the structural transformations I am going to look at, as the counter-part to the allocation story, are those affecting the sectoral growth mix or *dynamic structure*, and its evolution through the *phases* of the transition. The former gives us the articulation of macroeconomic performance into the component sectoral behaviours. Keeping track of the phases, on the other hand, is the more important, the more uncertain is the direction of the transition process. Therefore, it is in particular useful when this exhibits persistent fluctuations, as is the case with Romania, but hopefully a repeating pace can be detected.

To follow such disaggregated dynamics, I'll simply take the rate of growth of value added (instead of its level) *and* the rate of growth of gross (and, whenever possible, fixed) capital formation. Both rates are to be evaluated in terms of *employee* or per *operative,* as what matters is the behaviour of labour productivity relative to investment per worker[11]: the latter being an

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[11] Therefore, they will often be called "net" meaning net of employment growth, to distinguish them from the "gross rates" of growth: v and i , respectively. I choose value added as an index of the net sectoral output, i.e. net of inputs. The choice of value added as an index of output (and therefore a basis to compute labor productivity) is appropriate to a sectorally disaggregated framework. GDP is basically obtained via aggregating value added across sectors (and then adding net transfers).

indicator of the rate of installation of up-to-date equipment and generally the building of new capacity. Taken together, these two rates are employed to index a *growth path*, of the economy as a whole or of a single sector, depending upon the level of data aggregation chosen. Comparing one with the other is, in any case, is an interesting exercise. It will show that a lot of diverse, typically fluctuating, dynamics of the various sectors disappears in the aggregation procedure producing ideal transitions. This is, however, a piece of valuable information about how an economy actually functions, and it may prove relevant to understand a number of issues with policy implications.

Take, for example, *sustainability*, which is often discussed but it is almost never defined more than intuitively. Sustainability has really to do with the *growth mix* of sectoral paths and its pattern in terms of phases (as defined above), rather than just with macroeconomic performance in the averaged long run. For another illustration, take the question of the convergence of transition countries towards performance of the more advanced economies. As we have seen, it is often referred to as a simple reshuffling of the *sectoral structure*. In this new setting, instead, it means convergence towards a common dynamic pattern in the evolution of the growth mix. Convergence to a common equilibrium mix of activities is a pre-requisite to attain the latter, or its by-product. I believe that, within this dynamic framework, growth patterns of advanced economies may serve better for understanding what is happening to transition countries.

Growth theories as we have them, offer explanation for only some of the growth paths as defined above: namely, for those where a stable relationship between the two variables can be detected. As the focus here is upon *dynamic structures,* which involve in general a number of sectoral paths and generally are changing over time, it is useful to have a qualitative criterion to discriminate "similar" from "different" paths (which may be associated with two different economies or with the same but in different transition phases). Value added and labour productivity may, for instance, exhibit a *strong* dependence upon the pace of *capital accumulation*. When, for example, technological progress is embodied into physical or human capacity (when, say, new technologies need new machines), the faster we accumulate the better is the equipment installed because it is more recent, and the more production-effective is the labour time spent operating it. At the other end of the conceivable situations, something like *innovation* can be seen generating the growth of labour productivity. Operationally, innovation can be thought of as a sort of *residual set,* where value creation and productivity cannot be linked functionally with the accumulation of productive assets. Fast productivity dynamics looks un-related to equipment modernization, when, for instance, innovation is taken in the conventional definition: invention and marketing of new products and/or the adoption of new ways of producing, which either increase product prices or decrease unit material cost, hence widening their gap which is precisely the firm's or sector's value added[12]. Of course, the list of economic operations classified under the heading of innovation can be much longer including, among other things, organisational reshuffling that have to do with firms size and inter-firms relations. In transition countries, innovation is represented fundamentally by labour restructuring in its various forms, of course, so that one may expect a great deal of it affecting the dynamics of productivity.

Thus, the growth of labour productivity can be driven by innovation *or* by capital accumulation. Neither of these two types of paths can be found prevailing in pure form in reality, of course, for these are two extreme characterisations whose usefulness is in organising one's ideas. One should think of them as two different *growth engines* because they imply economic mechanisms qualitatively rather than quantitatively different from one another. Still, performance measured by any standard index may be the same on any given time horizon. It is useful to think of the paths generated by either mechanism as lying in different partitions of a state space that will be

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[12] This framework is close to the one proposed by Aghion and Howitt (1999).

called later Framework Space. Being generated by distinct theoretical models, they will be called *growth regimes*.

In analysing and comparing histories of transition, the first exercise one can carry out, is to check which of these regimes prevails, if one does. Of course, the implications would be different, also at a policy level. To see this, assume the same performance in terms of productivity. A country with a history of constantly high accumulation and therefore a relevant proportion of newer capacity would have an evolution, in terms of product and process specialisation, human skills and foreign trade, quite different from a country whose development has been based upon relatively higher rates of innovation.

The notion of *regime* permits to discriminate between performances that would not appear much different in a more conventional, quantity-oriented approach.

4. 1 Sustainability and the dynamic trap

Sustainability is essentially a qualitative notion, because it is a property that can only be attributed to the constellation of variables characterising a set of growth paths. Thus, I believe that, whenever the current path of the Romanian economy is defined un-sustainable, implicitly the notion of dynamic regime is being used. Only when this is made explicit, that issue can become fully understandable. With reference to Romania, we have to reorganize in the regime framework the data from Fig. 4.1, displaying the transition or *long run* scenario via annual average rates of growth of our chosen macroeconomic variables[13].
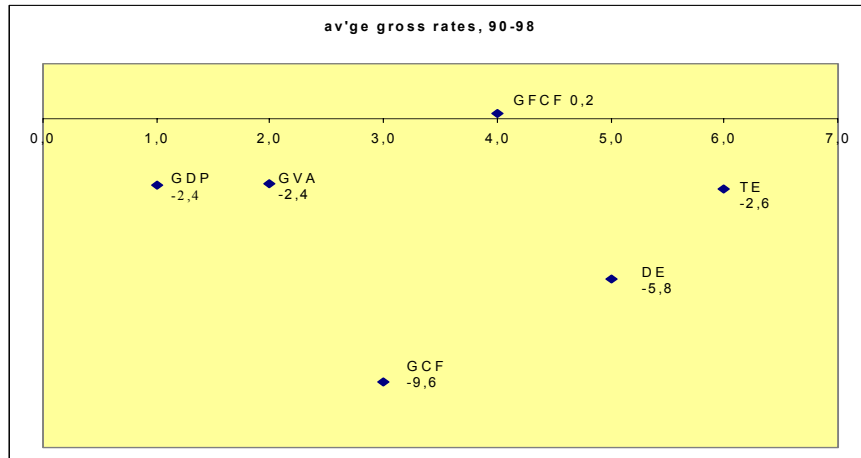

Fig. 4.1

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[13] Gross Fixed Capital Formation is the economy's aggregate, which, for lack of data, will have to be often approximated by Gross Capital Formation. This raises some problems with interpretation, that are briefly discussed later, GVA stands for economy-wide aggregate Gross Value Added (a figure close to GDP), and E is Aggregate Dependent Employment (TE, total employment). The percent rates of growth of GFC/E and GVA/E, or GDP/E and GFC/TE and GVA/TE, or GDP/TE are to be computed with reference to a chosen, standardised time, a *clock:* hereafter, there are two, the *long run* average over the transition so far, and the cyclical phases obtained from the output W-response.

The *regime framework* looks at how the values of the growth variables are related to one another. Here we are concentrating on the long run in order to extrapolate tendencies. As they are all negative (a negligibly positive rate being associated only with Gross Fixed Capital Formation) contraction is indeed the general tendency in the economy seen in the aggregate.

We look, first, at the rates of growth of GVA (and GDP) per *employee*, computed by taking the differences between the corresponding (gross) rates in Fig.4.1. Seen through these indicators of labour productivity (3.47% and 3.40%, respectively), Romania seems to be well set upon a process of dynamic productivity gains. The corresponding *average* rate of growth of Gross Investment *per employee*[14] has, however, a negative value of -3.6. Hence, gross capital formation has been steadily contracting *relative to employment* throughout the transition years, notwithstanding a simultaneous contraction of employment at an annual rate of - 5.84%. But total Employment has been shrinking too, although at lower rate, and therefore the accumulation/productivity scenario is really worse. Aggregate productivity has in fact been stagnating, and GCF measured *per employee* has been falling twice as fast. In terms of gross fixed capital proper, the rate is up to +2.64, but this is the result of total employment shrinking vis-à-vis a practically nil investment. (Figs. 5.1a-5.1c, below, show the dynamic path for the aggregate economy).

Thus, the contraction of dependent as well as total employment levels entirely accounts for whatever increase there was in productivity. There was, in fact, at the same time a fall in both output and GCF. Moreover, GFC Formation went on at such a low rate as to surely prove unable of ensuring replacement of worn-out capacity, not to speak of improving its quality. More recent performance is even worse, as pointed out above. The fall by as much as −10.8% in 1999 (compared to the previous year), shows fixed capital formation set on a rapidly accelerating negative trend, partly linked with the drastic reduction in FDI.

One can say therefore that Romania's path has been so far associated with a process of continuous *restructuring*, if such a term is taken to indicate what normally takes place in the early phase of the transition: i.e. labour shedding and generally employment reduction output fall, irrelevant productivity gains of actual losses. The trouble is that, in Romania, this has been going on throughout the transition so far, and it seems to be still going on.

Sustainability is about the future of an economy and from a framework with growth rates tendencies can be extrapolated. (Actually, this is the good reason for dealing with growth rates instead of levels.) These tendencies look far from reassuring. First of all, on the whole, none of the long run efficiency gains that were expected from restructuring seems to be emerging. The reason at this point is fairly obvious. If we look at restructuring as a process of substitution of capital to labour, it can be accomplished in a variety of ways but it cannot go on forever. There must be a certain threshold level at which efficiency gains generated in this way (at no cost) become nil. Beyond that level they can only convert into net output losses. Simple growth accounting suggests that continuing one such process must have a resource cost, but no reward, that will be born by the economy as such in one form or another.

It is a threshold of this kind, that Romania seems to have surpassed, judging from the signals. One is the absolute contraction of output, but the principal signal is that *the economy seems to move definitely out of the restructuring regime*. It only does so temporarily and as a result of

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[14] There are discrepancies between the figures according to the *13 main activities* breakdown in the Statistical Yearbook and the one-sector National Accounts system (e.g. for GCF, GDP and GVA), hence there should be two figures, coupled respectively with GVA and with GDP. Here, I am using the National Accounts figure for GFCF with both GVA and GDP.

exogenous shocks. The process of massive resource shifts and destruction (by forcing the socially or economically weaker out of the potentially more dynamic economic sectors) should have been matched by an equally sustained capacity renewal and technological updating. Since the beginning of the transition (but in fact even before), Romania had investments falling faster than employment. Thus, fewer and fewer workers were being equipped with a rapidly ageing and globally shrinking capital stock. Their increasing productivity, as an accounting figure, could not prevent total output from falling, but perhaps permitted some windfall gains. In the end, this persistent *restructuring* has contributed to perpetuate the inherited technological stalemate.

Paths of this type are un-*sustainable* because, in a sense, only re-allocation of existing resources takes place, and this activity is itself resource-costly. Paths that are either accumulation- or innovation-driven can be long lasting, because their resource balance is positive, net economic resources being added through capital accumulation, acquisition of new technologies, introduction of product and process innovations. These are by definition the only sustainable regimes[15]. Passing through the restructuring regime should be a phase on a pattern landing into the set of sustainable paths. Being stuck there is the *dynamic trap* into which Romania's transition seems to have fallen.

What is the practical value of referring to Romania's un-sustainable *regime* instead of *path*? It is to stress that the issue is not so much related with individual indicators of performance as, instead, with the overall scenario, which can only be comprehended through a constellation of inter-related variables and the knowledge of why these "constellations" of values are different from others. Seeing the individual path immersed into a set of likely non-sustainable paths, should suggest that exiting from such a situation is fundamentally a matter of changing qualitatively by changing the very mechanism of economic growth, and it conveys an idea of the efforts needed to accomplish such a task. And in fact, this is a good understanding of the issue. This would be pretty much the same with any of the paths in the restructuring regime, not with that single one. The trouble is in the fact that the country is in that regime.

Economically, a *trap* is a situation where no new resources are being created, but a *dynamic* trap is also a sort of repetitive dynamic behaviour. So, it need not be a static position but, on the contrary, it can be quite dynamic, as is the case with Romania. It has been by looking at the phases of the transition path, which we can find this out. Romania's economy has been *basically* struggling where the successful transition countries have spent the early years, while cleaning up their economic structures. But, to see the dynamics of Romania' s sustainability issue, we have to go behind the long run picture, and to track down the transition phases.

While showing the value of considering *transition pattern*s, in other words of keeping track of the phase sequence, this exercise will indicate the link to vulnerability.

4. 2 Sustainability and vulnerability

The main point of the previous discussion is that sustainability is a multi-faceted issue. Romania's situation cannot last forever, by definition; and ten years are already a long time. How then, has an unsustainable path lasted this long, and no end is still in sight?

This process of contraction has been made possible only by the "smoothing" effects of the cyclical behaviour of the economy *coupled* with a peculiar distribution of sectoral paths across regimes. As we will see in the next section, the sectoral growth mix diffused and diluted to an

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[15] In the language of the regime framework, *sustainability* implies the existence of a long run *regime attractor*, which need be in the growth region (the set of paths driven by either accumulation or innovation). Of course, this is not the sole definition available.

extent, the effects of the contraction. On the other hand, fluctuations stretched the contraction over time, thus rendering it socially bearable. To see how this worked, take the phases in the fluctuation of aggregate output, 1990-93, 93-96 and 96-98. The W-profile of the output levels is reflected in the growth rates of labor productivity: a pronounced fluctuation is behind the *long run* tendency of labor productivity to stagnate, as the latter is actually the averaged outcome of an initial fall (at – 3.4%) followed by short lived, fast growth at 5.3% soon relapsing back onto a worse path (at – 4.5)[16]. Fluctuations in the pace of both GFCF and in GCF are not any less wild.

These parallel fluctuations and the simultaneous dynamics of employment define the economy's *structural cycle,* which is the sequence of regimes "visited" by Romania during the transition phases. *Seen in the aggregate* through GDP, such cycle includes a brief spell of fast accumulation with corresponding productivity growth during the mid-90s boom as really *an episode*. Throughout the oscillation, the constant behaviour is that both *value added and investment have been contracting economy-wide.* The fact that they outperformed the simultaneous employment reduction shows up in that, during the downswings, the economy begins and returns to the third quadrant, rather than in the restructuring regime.

Moreover, the rates of growth of GVA and GCF (here, a proxy for GFCF) are always lower than the corresponding rates *per employed*. The overall positive performance of labour productivity has been determined by the process of labour expulsion *throughout* the cycle and not just in its early phase (as elsewhere). This disposes of a thesis that might be entertained, that something went wrong at one point of Romania's transition path which otherwise would be homogeneous to other paths. Instead, it indicates that something was missing throughout the whole duration of the transition process.

Thus, the picture of *an aggregate dynamics unsustainable in the long run,* is a sort of distorted average of a quite pronounced oscillation. Of course, the overall situation would be even more disastrous from the social and economic point of view, had it not been for the 93-96 *escape* into a sustainable regime.

Like a slowly dying patient, *Romania's economy has to breathe from time to time to last a little longer. Fluctuations administer this extra, though temporary, oxygen.* The country has been actually lucky to be able to do so as the result of the interlocking of timely exogenous shocks with political cycles. There may have been a clever design in this timing. The heavy structural fluctuation across regimes is its result. The high instability of the economy as a whole makes its negative trend sustainable for a while. Thus, instead of representing a strange piece in this history, *these persistent fluctuations* are really the key to understand it.

Implicitly, we have discovered that it may so happen that neither of the two regimes predicted by standard growth theories, prevails; that there are other dynamic behaviours to take into account; and finally, that a transition pattern may show cyclical or even erratic fluctuations across two or more of such regimes[17].

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[16] Taking into account available data on 1999, the rate of growth for GDP/TE is –3.5.

[17] To introduce some order into paths that do not lie in either of the two growth regimes, the idea of *regime* is generalised to allow for the six regimes shown in the graphs. Deploying a simple geometric description, they are assigned six partitions of a plane with on the axes, the rate of growth of productivity and the rate of growth of investment per employed. Regimes are conventionally numbered clockwise, starting with the innovation-driven regime #1, where productivity growth is high relative to investment, to end after a full circle with the accumulation-driven regime #6, where the opposite is true. These two are about paths with nonnegative growth rates. However, growth rates of investment and value added *net of* (dependent or total) employment growth, may well be negative: e.g. when output or investment grows less than employment, so that productivity is falling in the former case and ever increasing number of workers find themselves with fewer machines of the more recent generation, in the latter. Thus, growth rates

5. Sectors in the dynamic trap

The real value of thinking in terms of regimes is that it gives a synthetic way to represent multi-sector disaggregated dynamics. Now, a growth path shows the relationship between three processes, involving capital creation, labour employment and output. If we look at the economy as a bunch of sectors, the economy's collective dynamics is something rather more complex, because it involves a distribution of sectoral paths.

Romania's transition looks even more complex from the viewpoint of the sectors' behaviours that are behind the aggregate scenarios of the previous sections. The unsustainable regime that shows up in the aggregate is really averaging out a high dispersion of sectors *across regimes* and *over time*. Any analysis and policy assessment should be made at the latter level, then, the degree of dispersion being a key component of the sustainability issue if we think of it as a structural problem. In fact, a variety of cyclical and erratic behaviours can be exhibited by output and productivity, or by the accumulation process, or by both of them. Keeping track of their dynamics may tell more about what causes what, perhaps something about what is likely to happen next, and finally it may help to guess where and what to do. To see why, compare a country where the accumulation process has been steady, with one where on the contrary this has gone on much more irregularly. One expects equipment to be not only of a more recent vintage on average, but also of a longer time-to-build profile in the former than the latter country. You would also expect to find more of R&D and other long-term investment activities.

To complete the description of Romania's pattern we need to look at this sectoral dynamics.

In fact, the prolonged intermingling between un-sustainability in the long run and short run erratic fluctuations can only rest upon a delicate balance within the economy's *dynamic structure*, some sectors doing better, and at different times, than others. Figs. 5.1a-5.1c display the dynamics for a *13 main activities* breakdown against the dynamics of the aggregates, *on average* over the transition years. They show a diffused cloud, which is eschewed along the investment axis but splits into two groups with respect to the dynamics of labour productivity.

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computed in this way demands the use of the whole plane. Elsewhere, the latter is called *Framework Space*, as it can be shown that it is the space of paths predicted by growth models.

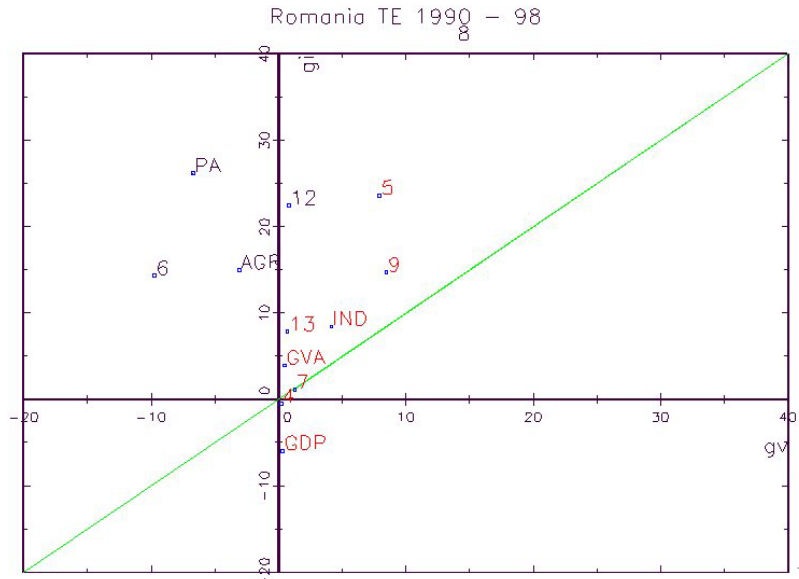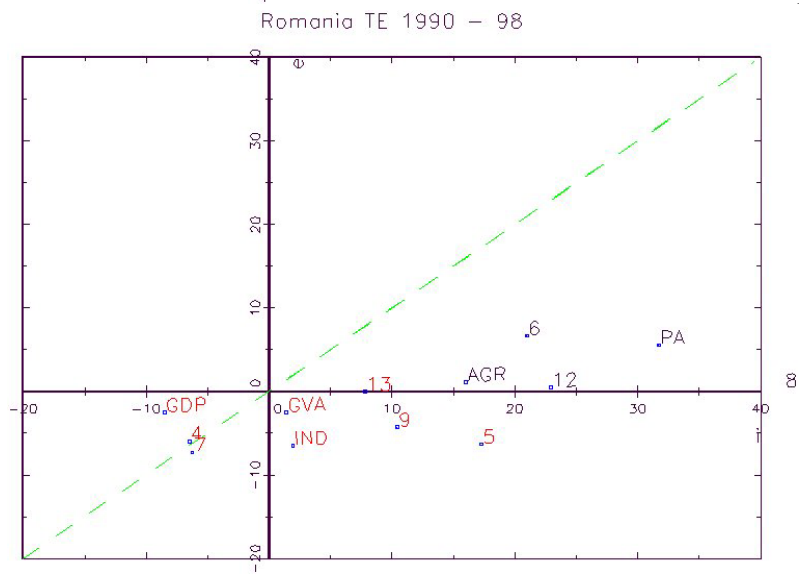**Romania Economy with T(otal) E(mployment) 1990-98**
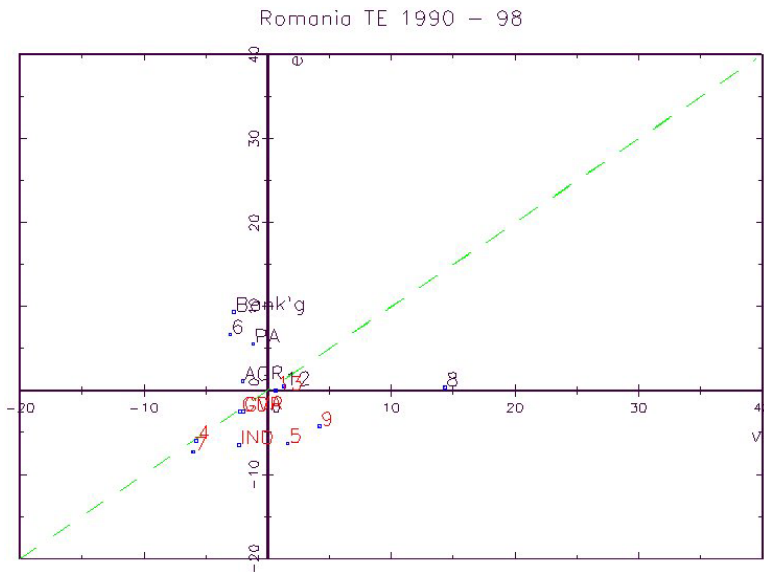

Fig. 5.1a

Fig. 5.1b

Fig. 5.1c

The picture confirms that the long run aggregate dynamics is indeed the net outcome of partly offsetting processes. Take total employment, which on the whole has being steadily shrinking in the last ten years. Its dynamics looks remarkably different across the 13 activities, 5 of them steadily reducing employment levels[18], the remaining 8 playing the *employers of last resort*. As expected, these comprise naturally expanding Trade sector, but also the still largely state controlled Banking/Financial Services, Public Administration (including Health and Education), and finally Agriculture, the labour reservoir. However, one should wonder what the situation would have been like, without the sectors in this latter group, in particular as regards to domestic demand, which has been, nevertheless, depressed. *In a vicious circle, the expansion of these latter activities in terms of total employment has to be counted among the social costs of the failure to start growth.* Such activities are less economically efficient (small trade, agriculture) or their efficiency cannot even be directly evaluated (as their productivity is determined by employment and wages, not by the value of their non marketable output). Therefore, if we consider output performance and efficient use of resources*, their expansion is surely among the central causes of the failure of flaring up a new growth engine.*

On the other hand, in contrast to the unsustainable dynamics exhibited by Romania's aggregate data, most of the 13 *activities* seem to be set for a sustainable expansion. On average during the transition years 1990-98, they have stayed on paths belonging to what I called the accumulation-driven regime, with high rates of investment growth per employed and comparatively slower productivity dynamics[19]. In other words, the behaviour of the *growth mix* seems to contradict

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[18] In order: Transport #7, Industry, Forestry/fishing #4 and Construction #5, Services#9, very moderately the Health compartment #13, too, to be added to the aggregate paths

[19] Notice that some variables are slightly different from those employed in the aggregate analysis of the previous section, e.g. *here* aggregate GVA is plotted against gross fixed capital formation, GDP against Gross Capital Formation. All other sectoral paths are in terms of the latter variable, and therefore they must be compared with the GDP path. The difference between the two shows up in that the latter is in the restructuring regime, the former in the accumulation-driven. Still the important property is that in both cases the rate of output growth is negative, and productivity growth turns up to be positive only as a result of a simultaneous much faster process of employment reduction, i.e. of rationalisation and re-organisation.

Note that the path of Banking and financial institutions is an outlier along the g_i- axis, and it is similar to the behaviour of Public Administration, Education, Construction. The fact that the aggregate figure for GCF reflect basically the behaviours of such *main activities*, accounts also for its remarkable gap from the value of Gross Fixed Capital Formation.

the thesis proposed earlier, of an insufficient process of capital accumulation during the transition years. It suggests, on the contrary, that the 13 activities may have been in an unusually prolonged phase of capital accumulation whose benefits in terms of productivity have not yet had time to show up.

Closer inspection reveals, first of all, that the image of an apparently fast and cross sector diffused accumulation (with peak rates of 30% and higher), reflects the investment patterns of sectors that are still fundamentally state-controlled or are in various forms under the direct influence of government action. In these, gross investment most often does not mean accumulation of new capacity in the strict sense (for, some of them do not even produce marketable output, see e.g. PA, Education and Health). The large figure for Agriculture, on the other hand, is clearly linked with the land privatisation program that created a private sector there, though with very low efficiency standards. Finally, the high investment growth rates registered in Services, Trade and Construction, while partly reflecting the creation of new private firms, still have no clear implications in terms of capacity creation. For Industry as a whole, the average annual rate of investment growth is comparatively much lower.

Communication (sector #8) may be the exception proving that where fixed capital accumulation was high (relative to labour restructuring) and new technologies were introduced, productivity grew fast. For the other sectors, dynamic productivity gains descend from rates of sectoral value added contraction lower than the corresponding rates of total employment reduction (as shown in Fig. 5.1c). However, *in the cloud of sectors, there does not seem to be any evident relation between sectoral investment pace and output pace (and thus between investment intensity and productivity) associating high values of the former with high values of the latter.* Generally, value added has been falling in all main activities, the notable exceptions being some components of the private sector (belonging to Services, Trade and Construction) together with Banking and Financial services, which are in the public sector area.

This is *a* sectoral mirror image of the macroeconomic *investment puzzle*. There may be many candidate explanations of this *puzzling* result. The simplest of them, and also perhaps the most likely, is that gross investment data is not for all sectors a good proxy for fixed capital formation, which is what we are really interested in. I have pointed this out before, for the public sector, but the same observation applies to public utilities and to some of the industrial sectors that like the public utilities are still dominated by state-owned firms. Therefore, high and sustained levels of investment there compared with other activities, have largely to be counted as costs to the economy, in terms of resources diverted from more productive projects. Adding to this their negative output growth (that eventually mandates direct and indirect subsidies) and the retention or even net absorption of employment, we get an idea of the total cost of this inefficiency in terms of the economy's dynamics.

This resource drain is however but one of the factors of *non-sustainability*. The economy has been performing poorly on the whole, as the investment puzzle, among other things, indicates. So, it makes sense to check by looking more closely where this problem (i.e. the difference between GFC and GFCF) is likely to be less important.

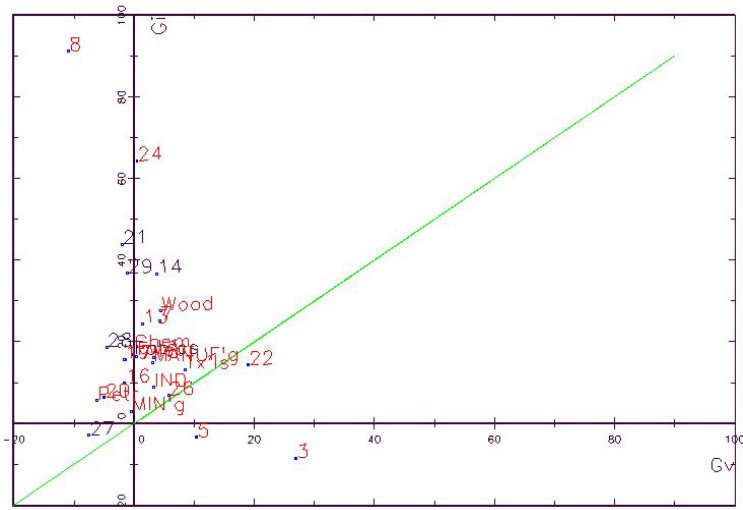**Industry 1990-98**

Ind'l sectors 1990 — 98
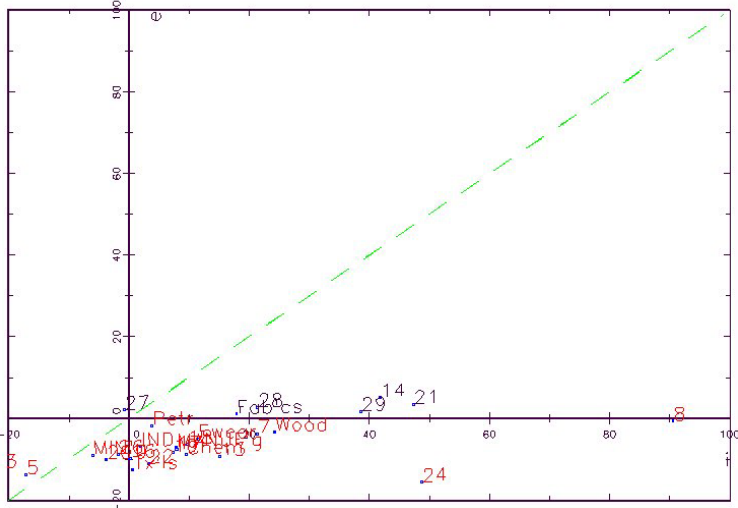
Fig. 5.2a

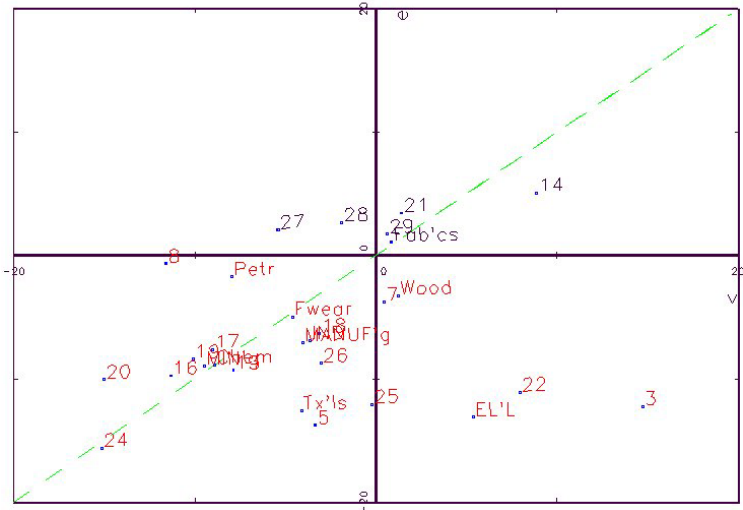Ind'l sectors 1990 — 98

Fig. 5.2b

Ind'l sectors 1990 — 98

Fig. 5.2c

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It does not add much nor change our perception of the accumulation dynamics. The aggregate path in terms of GVA (instead of GDP) and GFCF (instead of GCF), too, shows falling aggregate value added against positive, though slow, capacity creation. Industry in the aggregate, on the other hand, exhibits the same behaviour (both of them ending up in the accumulation regime only due to accelerated labour shedding). Zooming in on Industry with a finer breakdown of industrial sectors seems to confirm this picture of capital formation in relation to productivity (see Figs. 5.2a-5.2c). Dynamics in the accumulation-driven regime has been widespread among industrial sectors, whose cloud of paths is also very eschewed along the accumulation axis. However, again the uniformly poor productivity performance across sectors does not reflect so much the generalised high rates of accumulation, as the fast process of employment reduction[20]. In fact, the dynamics of value added is quite different across industrial sectors, which split into a group where value added has been growing and a group where, instead, it has been falling, on average, over the transition. There are far fewer industries in the former than in the latter. Moreover, among the latter are industrial sectors where the processes of privatisation and creation of new private firms have gone the furthest, next to still state-owned firms. That, together, these make up the bulk of Romania's exports, shows that their international competitiveness cannot rely upon their production performance.

It also confirms that the puzzle is there: a path of high investment seems unable to generate adequately high output, not even in the more privatised of the industrial sectors.

And the structural cycle(s)

So, the clue to understand Romania's erratic dynamics is here. The accumulation-driven growth apparently prevailing during the transition across main activities and industrial sectors is the result of the much more complex and articulated evolution in the shorter run. *However, that is not the regime where they tend to go or they return after a shock*. Such regime appears to prevail in the "long run" of the ten transition years simply because the picture is heavily biased by the spell of intense activity in the brief expansion at the middle of the 90s.

The early transition recession *and* the recession started in 1997 provoke a scattering around of the paths of the main activities, like those of the industrial sectors (see Sheets #1 and # 2 in the Appendix). Although I maintain that the two recessions have some qualitative features in common, still the more recent one appears to be worse in many a respect. Capital accumulation appears to be intensive in certain activities (PA, Banking, for instance); elsewhere there is a fall in investment rates, more dramatic now than earlier. Corresponding sectoral productivity exhibits growth or contraction depending upon the corresponding dynamics of employment: in some cases (e.g. Banking and financial services) dynamic productivity gains that were earlier associated with employment expansion are now associated with falling productivity, in others they are matched with increasing investment intensity. On the whole, restructuring was very unevenly distributed during the phase 1990 to 93. In the more recent years, recession is definitely a more uniform tendency, with value added, employment and investment all falling at the same time and in almost all sectors. Only the usual sectors continue to play their counter-cyclical role, expanding investment and employment at the cost of a fall in overall productivity performance. In contrast with all this, the expansion phase at the middle of the 90s, brought about a sudden and strong inversion of tendency. It is only *then* that the prevailing of the accumulation-driven dynamics can really be observed.

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[20] Note that the graphs report only dependent employment, instead of total employment, which is only available at the economy-wide level and hence has been used in Industrial sectors (Graphs 5.2a-5.2c). This might produced a distortion between the aggregate and the sectoral behaviours.

Compared with the other *main activities*, Industry as a whole seems to have performed more uniformly throughout the fluctuation, having found a stable equilibrium of a sort, within the accumulation regime. This stability is, however, the joint result of investment and output fluctuations that are coupled with a steady trend of employment reduction. In fact, in the evolution of the cloud of industrial paths, there is embedded a relatively uniform *structural cycle*[21]*,* showing remarkably stable features: on the one side, the total employment downsizing is spread throughout all industries; on the other, there is a dramatic cyclical variability in the rates of growth of value added and investment. The latter two, in fact, are accountable for the variability in productivity performance. If we focus upon the subset of the relatively more privatised among the industrial sectors, the story does not change much. Expansion of both value added and investment takes place only during the boom in the middle of the 1990s, as is obvious: most of those sectors are export-oriented. Before and after, both have been actually contracting, generally faster than employment.

We see the importance of reconstructing the phases of the transition when, as here, its average or long run picture is unable to fully reflect tendencies. Romania's transition is fundamentally characterised by all-pervasive structural fluctuations that can be tracked down as a sequence of paths across different dynamic regimes. Such a sequence, appearing to be fairly homogeneous across sectors and stable over time, represents the structural counter-part of the aggregate fluctuations displayed by a variety of macroeconomic indicators. According to my interpretation, its presence reflects the instability of the growth mechanism through which technological advance and productivity are to be linked to each other if we want a virtuous cycle to start up. There is, nevertheless, a qualitative behaviour (at this point, only conventionally identified as a restructuring regime) that, at the aggregate as well as all disaggregate levels, prevails in the sense that the economy always returns to it and it spends more time there than elsewhere. Unfortunately, it is neither of the two growth regimes. The dynamic trap is more than a pure macroeconomic phenomenon, and it is not confined to the economy's long run.

The presence of such a pattern needs to be taken into account when inferring the tendencies in the country's transition experience. For textbook economies, one can ascertain long-run equilibrium paths. In these economies, there are no fluctuations due to structural reasons, shock-induced responses tend to die out, or to be significantly reduced, the closer they get to their equilibrium. This sort of expectations may be sufficiently well founded for (some) advanced OECD countries that, in fact, those theories take as a benchmark. The stability of such dynamic behaviour is clearly connected with another qualitative feature: the stability of the sectoral structure characterising such countries.

Thus, the possibility of a temporary dash into growth reflects the instability of the Romania's *sectoral structure* that allows for resources to be temporarily moved across sectors. The twofold fact that the economy shows no tendency to return to any of the two growth regimes and that, on the contrary, it seems to spend more time elsewhere, only says that no existing opportunities for growth are being wasted, there. The country, in a sense, is making the most of a shrinking patrimony.

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[21] In Industry as an aggregate, the regime #6 prevailing in the long run results from a regular oscillation between regime #5 and regime #6, itself. The dynamics of the distribution of sectors confirms such a pattern, though sectors cluster in regimes #3 and #4, instead of #6. But still they basically are lingering outside the growth outhunt.

…And the export sector

Behind the dynamics just reconstructed lies the fact that industrial products, still the backbone of the more market-oriented part of the economy, are also the core of its exports, with 97% of the total in year 2000. Some words have to be spent on this.

The well-known polarisation of the country's industrial structure inherited from the previous political regime is between heavy and lightweight industries that are highly capital or labour intensive. For reasons explained above, this structural feature went unaffected by the transition process. The former industries (mining, metallurgy, chemicals) largely depend upon imported energy (natural gas, petroleum) and existing capacity (giant, un-economical plants); they are large size firms still in the hands of the state. Lightweight industries, on the other hand, rely on the abundance of cheap but low-skill labour force, often also on national but depletable resources (e.g. forestry and other farming by-products) or imported raw and intermediate materials (textiles yarns, etc.). Basically, such industries are textiles, wood and furniture, footwear and the like. This is also where the small and medium-sized firms are located within Industry, and where a private sector struggles to survive: often new firms, rarely privatised and dismembered state firms. This polarisation is reflected in the structure of the trade balance. As of 1996[22], product lines such as apparel and accessories, furniture, footwear and leather goods, cork and wood, accounted for a 34.4% share in total exports; iron and steel, fertilisers, on ferrous minerals and manufactures, and other chemicals, on the other hand, for 22.2%. At the same time, imports of energy and iron ores alone had 20 % of the total, textile yarns and other related products a 9.2% (against an export share of 19.3%), leather and the like some 2.1% (exports of 6.2%). This shows how exports are interdependent with imports, and that there is a core of small firms working in subcontracting relations with foreign firms, and processing intermediate goods to the final stage of production. The portfolio of Romania's preferential trade partners is coherent with this picture. In the forefront are Italian and German firms, moving around the world (and in particular around the countries of South East Europe) to subcontract production wherever processing cost is lowest. Thus, in a significant portion of Romania's export-oriented and *private* sector, the model of industrial relations that has come to prevail, and probably it has actually favoured the birth of a private sector, is quite similar to Mexico's *maquiladora*.

In the end, sales abroad depend upon internationally low costs of imported primary resources, energy and more so, low labour costs, therefore upon subsidies, wage policies, the rate of exchange and inflation differentials with similarly specialised countries. It is there that the pattern of the current expansion seems similar to that of 1993-6: *the same occasional trade* partners (mostly in the EU, where a 63.7% of exports goes)*, the same volatile version of sub-contracting relations, and the same trade structure*[23]. Judging from data, the *maquiladora* system is actually expanding, without its side advantages. The trade balance seems to be frozen with export and imports growing at the same rate[24].

Given this apparently structural equilibrium that has emerged in recent years, the foreign sector can hardly ignite an economy-wide expansion. It directly affects some industries (accounting for most of the 6.7% industrial output growth in 2000) but its intra-sectoral multiplier value is low. Propagation to the rest of the economy can result only from other factors. Thus, trade relations have become a gate of entry for external shocks, rather than letting in new technologies and know-hows. On the other hand, volatility of industrial relations prevents those technology transfers and learning

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[22] Data from OECD (1998)
[23] These are well described by Zaman (1999).
[24] The export share of industrial products is still 95.4%, with for textiles and similar it has increased from 26% to 32 %, and for metallurgic and mineral product from 13.7 to 23.8%. The import structure shows similar tendencies.

processes that are normally associated with subcontracting relations. Therefore, the erratically arising opportunities to export low technology content products, the extensive and costly system of subsidies and the *concertina*-type of employment expansion in state related activities all conjure to freeze a productive structure in its fragility.

6: Three transition patterns

Romania's non-growth problem has, thus, many a facet. Rates of gross investment may have been high, but only temporarily with unusually high variability across time and sectors. On the other hand, often they have been high in sectors where it is hard to think that they represent modernisation and growth of productive capacity. Finally, in any case, they carry certain level tags. National capital stock and its technological quality were quite low at the beginning of the transition; their sectoral distribution was definitely unbalanced. (See Figs.6.1a) It remained low throughout the transition, and therefore sectoral polarisation did not change significantly.

The difficulty to ascertain a functional relation between the accumulation pace and the dynamics of productivity, and the fact that investment is very volatile, are two sides of the same problem. Diffused and exceptional levels of investment would have been required to fill in the profound technological gap at the beginning of the transition. The worst effect of economic volatility has surely been the impossibility of steadying the accumulation process needed to modernize the country. (See Fig.6.1b.) FDIs did not help, as they have been following the same erratic pattern. Thus, the country did not "catch up" technologically, thus remaining on the wrong side of the returns to scale threshold.

Fig.6.1a

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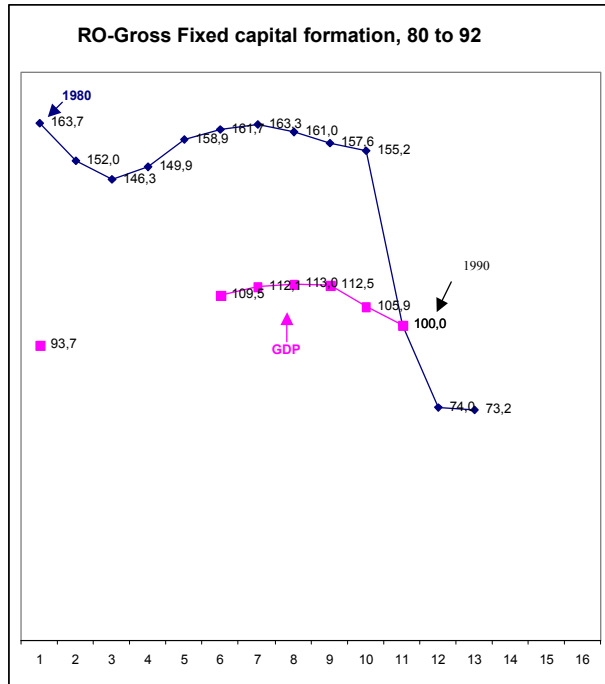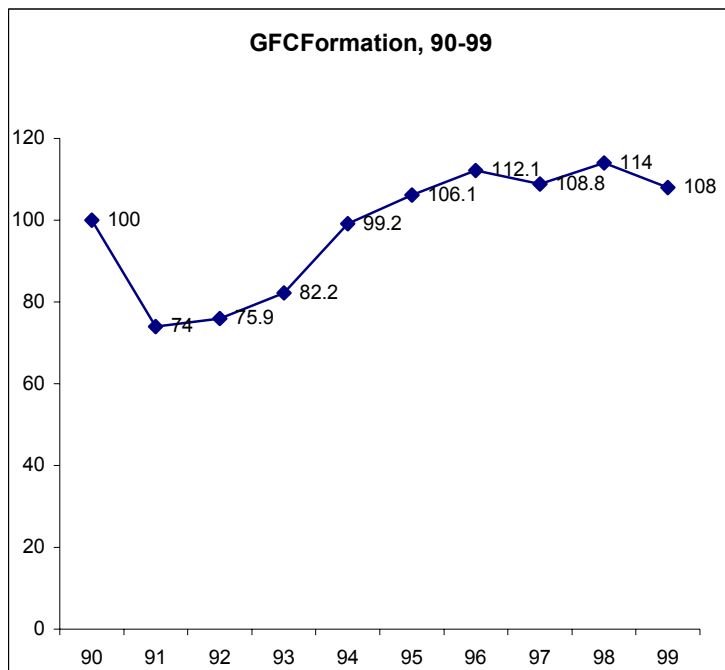
Fig.6.1b

My solution to the *investment puzzle* is, therefore, a simple one, as all first principles explanations are[25]. In synthesis, Poland outperformed the Czech Republic and Romania in terms of productivity growth because it deployed a better and a better-timed mix of labour restructuring *and* investment growth (see Figs. 6.2-6.3, below). Its initial process of labour shedding filled up an existing efficiency gap. When the growth enhancing possibilities induced by such rationalisation were exhausted, around the middle of 1994, an investment boom was initiated which, by bringing about diffused technological modernisation and sustaining domestic demand, kept economic expansion on track. This, of course, also permitted, in due time, to re-absorb sectorally redundant labour force through the creation of new firms and the expansion of existing ones, therefore generating a growing domestic demand while the country was entering international markets. Thus, the investment boom *added* new resources to the growth mechanism at the right time, when productivity gains that could be obtained through mere re-organization had exhausted and further gains could only come from new technologies and innovation. Investment really kept the growth engine going: its stability created the technological basis for long run growth while generating, in the shorter run, expansion through the simplest of all Keynesian mechanisms. The result is the sustained, so far un-checked, expansion that makes that economy a success story.

A steady investment expansion took place in the Czech Republic, too, but it was implemented in a different scenario. GFC brisk growth was coupled with a very (perhaps, exceedingly) soft approach to employment rationalisation, and labour shedding from still largely state owned firms was very modest. In fact, increasing the capital stock was meant to attain efficiency gains without going through the rationalisation of existing resources, and actually to make up for the latter. Hence, the unusually high levels of capital formation in a country with a relatively high capital stock, already. That a socially painful but necessary phase in transition could be avoided, was clearly a bet, which did not pay in terms of productivity growth. In a sense, *that country had too much investment, but too little restructuring and reallocation of resources.*

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[25] "The piece that does not fit here is the relative performance of labour productivity in Poland and in Czechia. Other things being equal, one would have expected labour productivity to increase less in Poland and more in the Czech Republic. The data suggest that the opposite has happened. I have no resolution." (Blanchard, (1997), p. 76)
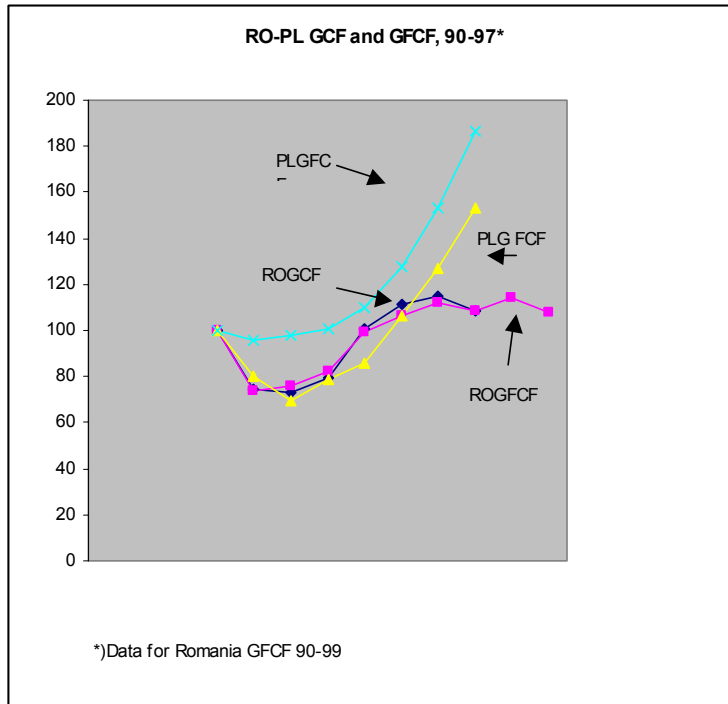
RO-PL GCF and GFCF, 90-97*

PLGFC

ROGCF

PLG FCF

ROGFCF

*)Data for Romania GFCF 90-99

Fig.6.2

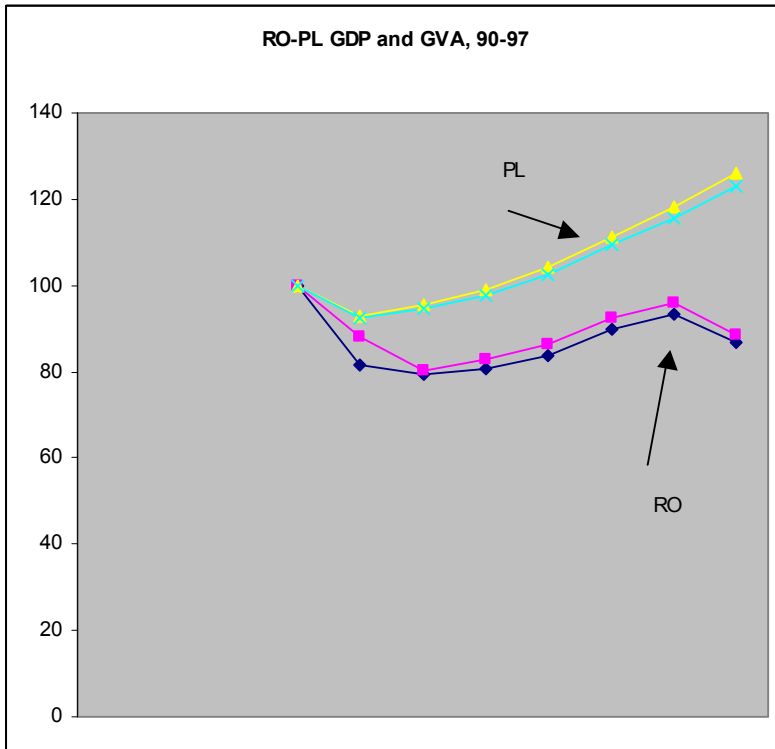**RO-PL GDP and GVA, 90-97**

PL

RO

Fig.6.3

Romania is, then, located at the other extreme from Czech Republic. A modest capacity creation is conjugated with a much deeper process of labour shedding from the productive part of

the economy. This partly resulted in expulsion of labour force, partly into its relocation in lower productivity sectors (the public sector at large, including public utilities, and some industrial sectors; agriculture) that eventually had to be subsidised to keep them going on. Therefore, the net result was a shift and rename of firms' redundant labour force that became a social burden. Ephemeral productivity growth disguised long term structural problems. The expansions that we have seen so far can even be detrimental, in this respect.

Thus, we see here three different ways to cope with the technology threshold. We may say, the labour intensive in Romania, the capital intensive in the Czech Republic, and the "Polish one" where both capital and labour were adjusted, perhaps optimally. This can explain its success and justify why it represents, for many, the *ideal transition model*.

I surmise that the *transition patterns* for Poland and the Czech Republic will look quite different from one another, and from the one we have seen for Romania.

7: Living on the wrong side of the technological threshold

The characteristics of the structural cycle prevailing across Romania's sectors do not point to any positive evolution of the transition process. They show that the vulnerability of such economy derives from a deep stalemate, which is at the same time structural *and* technological. The volatility of investment and its sectoral distribution have prevented economy-wide modernization and thus the attainment of those minimal technological levels, beyond which constant or better increasing returns set in and ignite the growth process. The sectoral structure has tilted towards less productive and dynamic activities, which however act as social stabilisers, acting counter-cyclically on the labour market. The result of such a twofold stalemate is a contraction trend with the possibility of exhibiting temporary expansions. Exogenous and domestic shocks take advantage of the latter, policy interventions so far failed to alter the former tendency.

The current path of Romania is unsustainable simply because an economy cannot shrink forever. At the same time, its responsiveness to external shocks shows that this is an unstable trend, but the country is trapped in a sort of cycle. From a general point of view, this shows that there are virtuous and vicious transition patterns. Being on one or the other is likely to depend on a number of factors, among which are initial conditions and shocks. To leave a vicious pattern for a virtuous one requires positive shocks to the real side of the economy. More focussed interventions are required to exploit the positive momentum.

More specifically, a *structural policy portfolio* with some chance of success will have to include measures to put Romania back on its feet and to speed up the process of capital accumulation[26], but it will also list the following 3 items very high among its priorities:

i)   measures for ensuring technology transfers including those of the human capital type
ii)   measures to promote innovation and its diffusion;
iii)   measures targeting certain sectors capable of producing new employment by promoting a higher rate of birth and development of SMEs.

Such measures are for the supply side, i.e. to sustain and expand output and productivity and, perhaps, for export. But these are also policies also for creating, through the recovery of the

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[26] This is mentioned also in the Government's Medium Term Program.

levels of employment and income, levels of effective domestic demand that are needed to trigger and then to sustain the early phase of an expansionary cycle. Altogether, they may represent a package that, it is reasonable to expect, will set the country onto a path *out of the transition* as this has been up to now. Hopefully, it will solve the sustainability problem by making the current path unstable into the right direction.

It is this engineered instability that will prove to be the innovation so badly needed in the country's recent history, a promise so far not honoured. Escorting the economy onto this new path will render it gradually less exposed to shocks of whatever origin, therefore rendering it on the whole much less fragile. As we know, only speedy and successful transitions can buy social and political stability.

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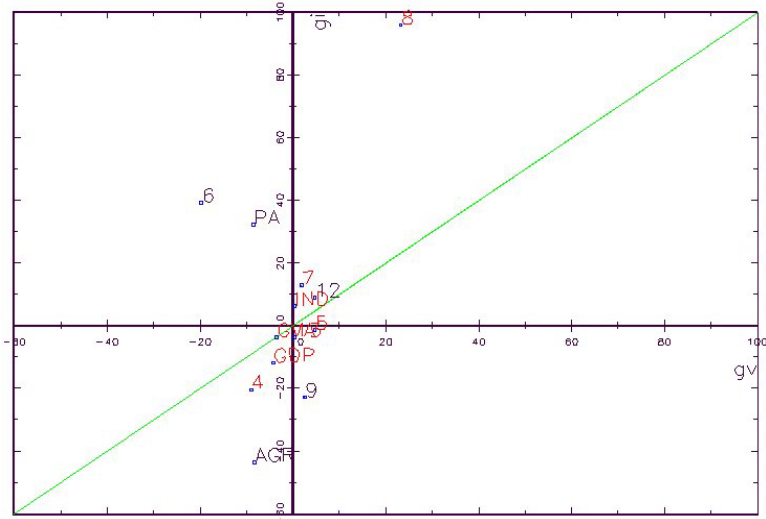
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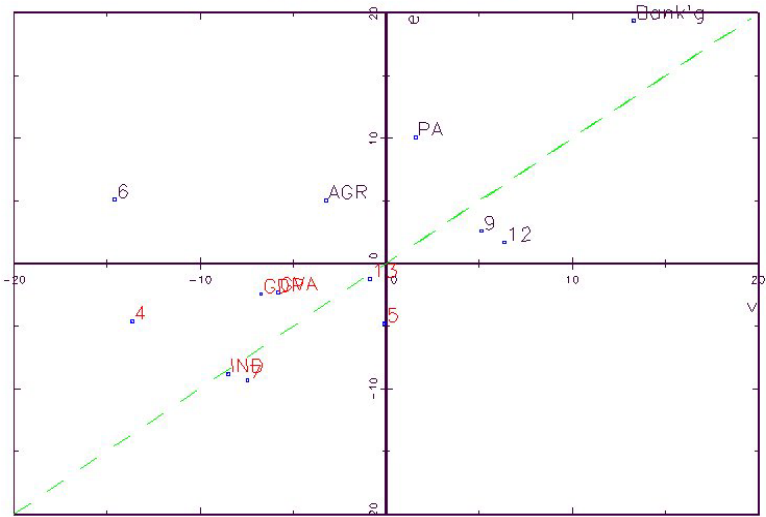
Appendix
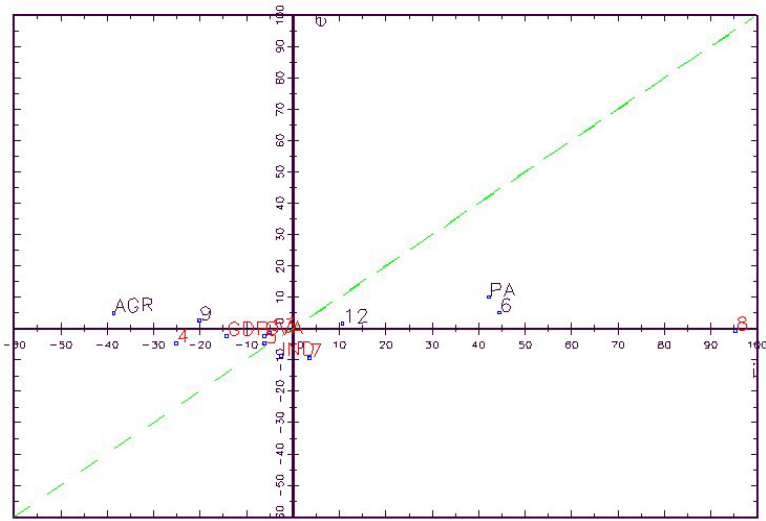**Sheet #1 Romania Economy with T(otal) E(mployment) 1990-98 (1/3)**
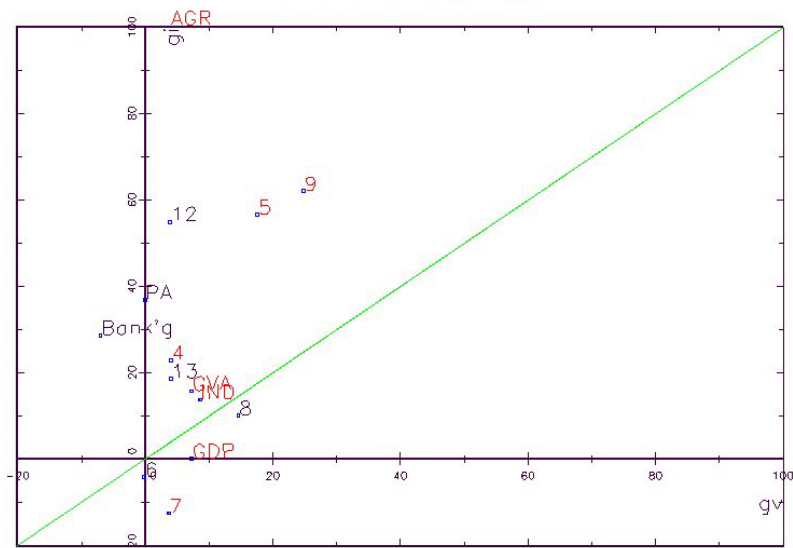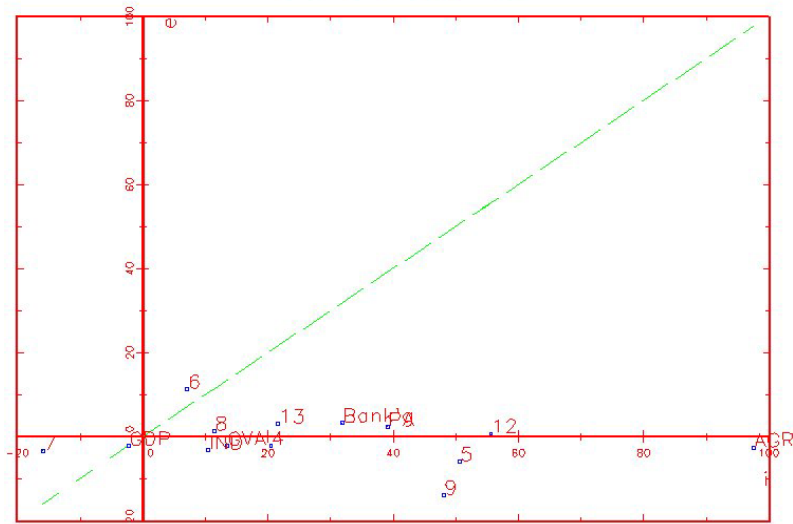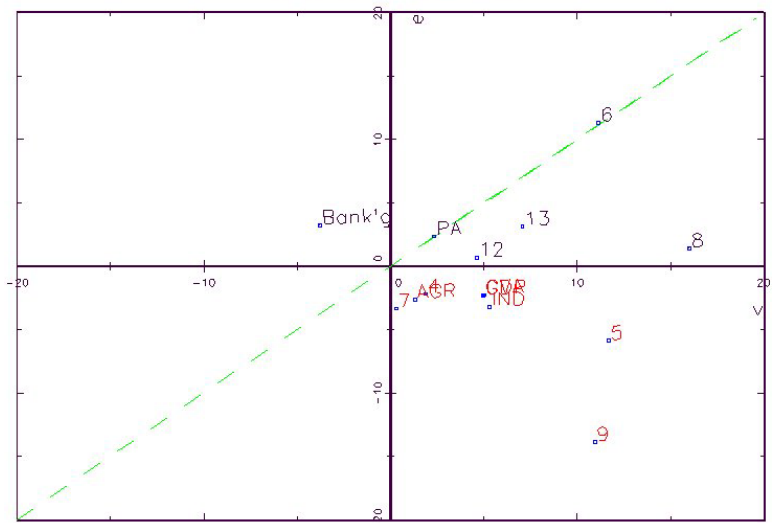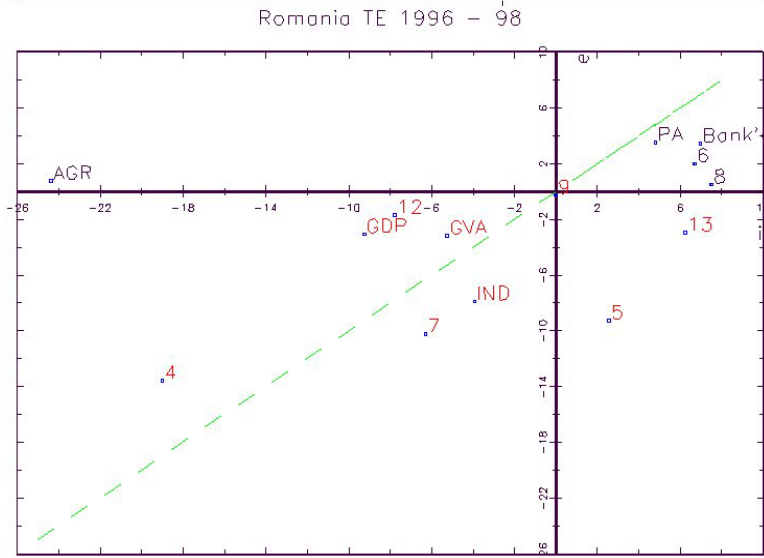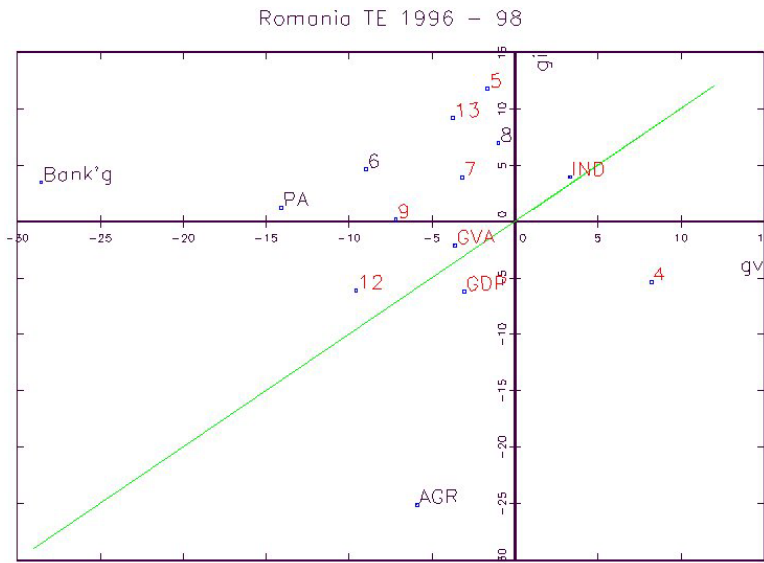

Romania TE 1990 – 93

Romania TE 1990 – 93
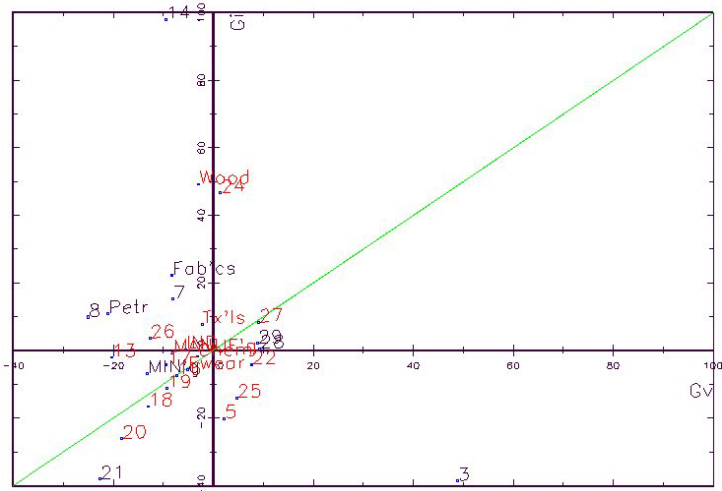

Romania TE 1990 – 93

Romania TE 1993 — 96

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Romania TE 1993 — 96

Romania Economy with T(otal) E(mployment) 1990-98 (3/3)

Romania TE 1996 – 98

Romania TE 1996 – 98
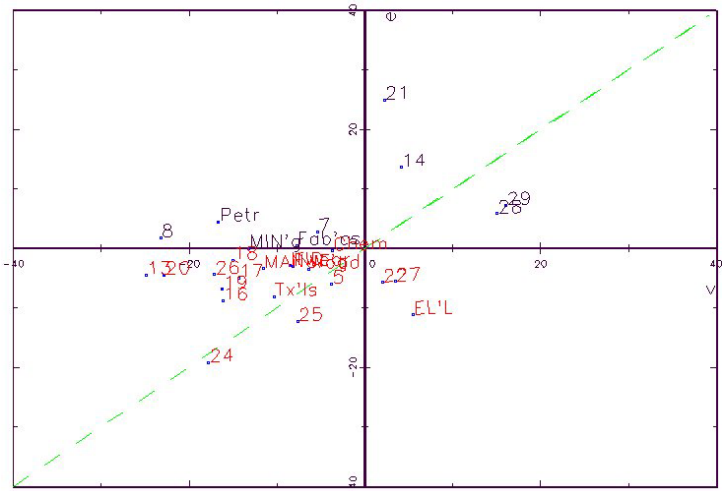

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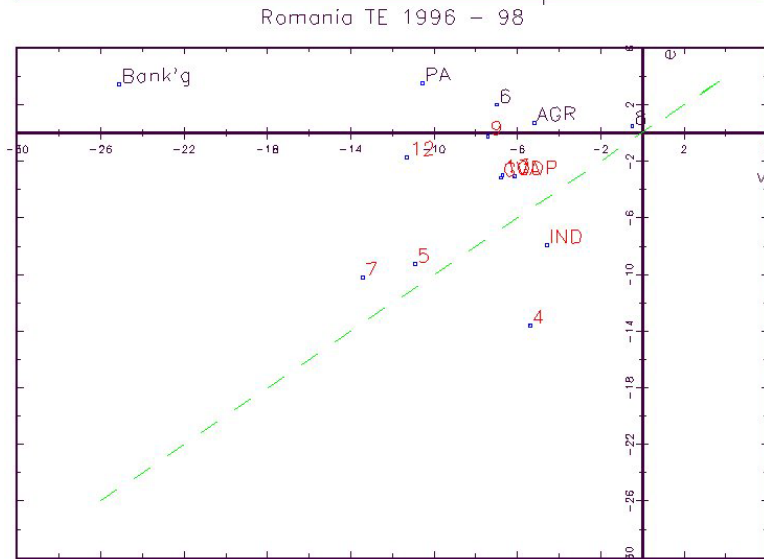
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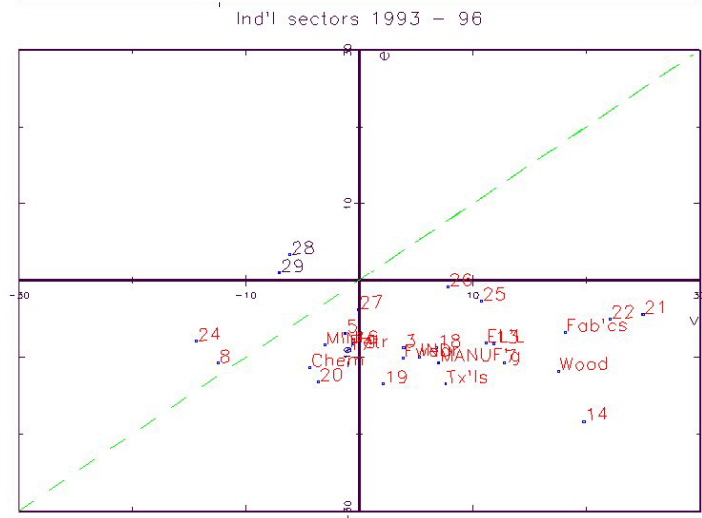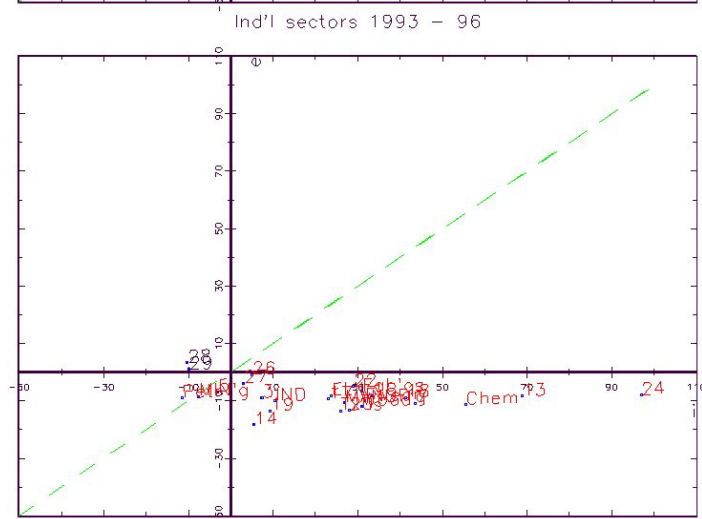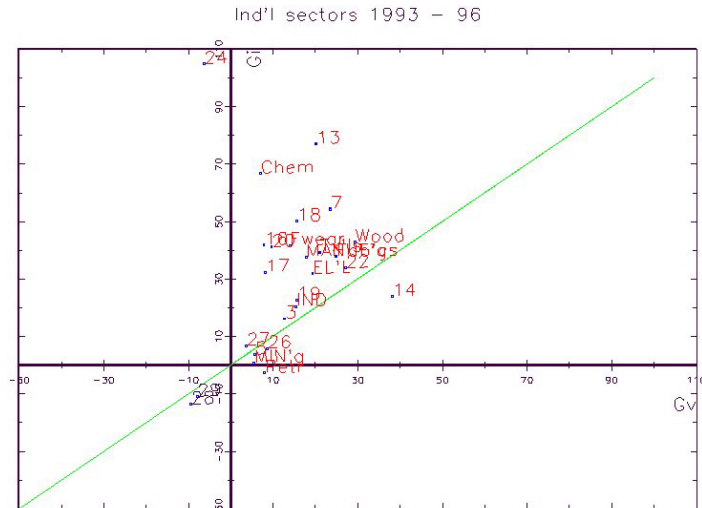

Ind'l sectors 1990 – 93

Ind'l sectors 1990 – 93

Ind'l sectors 1990 – 93

Industry 1990-98 (2/3)

Ind'l sectors 1993 — 96

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Industry 1990-98 (3/3)

Ind'l sectors 1996 — 98

Ind'l sectors 1996 — 98

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