Post-Productivism and Welfare States: A Comparative Analysis

ROBERT VAN DER VEE N AND LOEK GROOT*

This article provides operational measures for comparing welfare states in terms of the concept of post-productivism, as pioneered by Goodin in this Journal, and discusses the normative relevance of such comparisons. Post-productivism holds that it is desirable to grant people a high level of personal autonomy, through the welfare state’s labour-market institutions and transfer system, and maintains that on average, people would choose to make use of their autonomy by working less, hence earning less and having more free time. By contrast, existing welfare states, for example as classified in Esping-Andersen’s three-way split of liberal, social-democratic and corporatist regimes, are largely ‘productivist’, as their policies try to design social rights so as ensure economic self-reliance through full-time work. The question is whether they actually succeed in doing so. With a limited dataset of thirteen OECD countries for 1993, three conditions of personal autonomy – income adequacy, temporal adequacy and absence of welfare–work conditionality – are discussed in terms of policy outputs, which can be read off from easily accessible OECD statistics. Two closely related concepts are explored: comprehensive post-productivism, measuring the extent to which welfare states approximate the ideal of personal autonomy, and restricted post-productivism, which follows from two common goals shared by all welfare states (avoidance of poverty and reduction of involuntary underemployment), and expressly focuses on the policy outputs on which the productivist and post-productivist perspectives specifically disagree: welfare–work unconditionality, voluntary underemployment and average annual hours of work per employee. After showing that ranking the thirteen cases puts the Netherlands at the top and the United States at the bottom, in conformity with Goodin’s earlier work, it is shown that restricted post-productivism is not positively associated with the poverty rate, and negatively with the rate of involuntary underemployment. This finding sets the stage for our discussion of normative issues underlying a preference for either productivist or post-productivist arrangements of work and welfare. Suggestions for further research are given in the final section.

1. BEYOND PRODUCTIVISM IN WORK AND WELFARE

Gøsta Esping-Andersen’s The Three Worlds of Capitalism is still the main reference point in the comparative literature on welfare states. Basically, his view is that the capitalist market economy is supplemented with a legal and organizational framework extending social rights to citizens, with the key feature of social rights defined as ‘the degree to which they permit people to make their living standards independent of pure market forces’.

Esping-Andersen’s contribution is a threefold typology. The liberal welfare state desires economic efficiency, designing its social programmes as residual provisions so as to avoid labour market disincentives and welfare dependency. The corporatist regime wants social

---

* Amsterdam School for Social Research, University of Amsterdam; and Utrecht School of Economics, University of Utrecht, respectively. The authors wish to thank Brian Burgoon, Michael Förster, Robert Goodin, Huib Pellikaan, Jelle Visser, Albert Weale, an anonymous referee, and especially Cees van der Eijk for comments on drafts in various stages or assistance with data. An earlier version was presented at the Workshop on Globalization and Welfare Reform in China, Japan and Korea, Amsterdam School of Social Science Research, 2003, the 25th IATOR Conference on Time Use Research in Brussels, 2003, and at the Utrecht School of Economics Seminar, 2004. Van der Veen gratefully acknowledges financial support from the Netherlands Scientific Council (NWO).

stability and social integration, with regulated work times, and occupational social insurance to ensure the continuity of family income in the face of unemployment and disability risks. The social democratic regime gives priority to minimizing poverty, income inequality and unemployment, largely by means of tax-financed universal benefits and active labour market policies. Each of these regimes makes living standards relatively independent from market forces, though the liberal regime certainly less so than the two others. But all three aim to subordinate that independence to (differing) values of the productive life and career during working age, whether as a family provider, or simply as an able-bodied member of the labour force. In that sense, Esping-Andersen’s welfare regimes are deeply productivist – they reject the idea that social rights should be used to liberate people from the social obligation to work for a living. To be sure, as Ian Holliday remarks, the concept of ‘productivism’, considered as a criterion for shaping and implementing policies of social protection, can be carried further than this. Holliday argues that welfare capitalism in East Asia (exemplified by Japan, Hong Kong, South Korea, Singapore and Taiwan) constitutes a fourth ‘productivist world of welfare capitalism’, in which social policy is strictly subordinate to the overriding policy objective of state-led economic development. According to Holliday, ‘Everything else flows from this: minimal social rights with extensions linked to productive activity, reinforcement of the position of productive elements in society, and state–market–family relationships directed towards economic growth.’

In this article, by contrast, we want to examine a largely hypothetical type of welfare regime – called post-productivist – which connects Esping-Andersen’s notion of economic independence provided by social rights to the political value of individual autonomy, following recent work by Robert Goodin. As Goodin and his co-authors explain, welfare regimes can be variously classified into types. One can focus on salient historical patterns of institutionalization, or on the typical policy intentions underlying a regime’s programme characteristics. Esping-Andersen’s typology of liberal, social democratic and corporatist welfare regimes is based on these two approaches. Alternatively, one can draw up definite criteria for assessing policy outputs, and then compare cases on how well they manage to deliver in terms of those criteria, regardless of their institutional history or programme types. To take an obvious example, one may decide that full employment, low wage inequality and low poverty rates are an interesting combination of desiderata for such comparisons, and then try to identify and explain the different performances of selected welfare states, for instance the United States versus Europe. Some welfare states are difficult to pin down in terms of the first two approaches. Goodin and Smitsman have argued, among others, that the Netherlands is a case in point. According to its history of welfare policies, the Dutch welfare state definitely looks corporatist. Categorized in terms of programme characteristics along the lines suggested by Esping-Andersen, however, the Dutch welfare transfer system at least appears as distinctly social民主, more so than Norway and Finland, but less so than the paradigmatic cases of Denmark and Sweden.

In his article ‘Work and Welfare: Towards a Post-productivist Welfare Regime’, Goodin concentrates on the third approach, that of policy output. Here he argues that the

---

Netherlands is a special case in yet another sense. When judged in terms of criteria that relate to the value of individual autonomy mentioned above, the policy outputs jointly delivered by Dutch welfare and labour market arrangements make the Netherlands a unique exemplar of a post-productivist welfare regime, which is distinct from the standard Esping-Andersen typology in a number of ways. While the liberal, corporatist and social democratic welfare states are respectively characterized by ‘work, not welfare’, ‘welfare through work’, and ‘work and welfare’ the slogan of a post-productivist welfare regime would be ‘welfare without work’. To explain, Goodin says:

Post-productivists would take a relatively relaxed attitude to relatively large numbers of people drawing welfare cheques rather than pay cheques for relatively protracted periods. Of course, not everyone could do so. Like everyone else, post-productivists need enough people to work in the productive sectors of the economy to finance public transfers to those who do not. Post-productivists are not anti-productivist. Their point is simply that economic productivity can be sustained at moderately high levels on the basis of far less than full employment, full-time for absolutely everyone of working age. Post-productivists see this as a matter of social choice, collectively opting for a more relaxed life.\(^5\)

Taken in this sense, ‘welfare without work’ means that modern economies can afford to take advantage of their productivity and dynamism so as to promote individual autonomy in their welfare and labour market arrangements, within fairly wide limits of economic sustainability. On this important background assumption, the policy priorities of a post-productivist regime would then be to provide the key conditions of the autonomous life for its citizens. Drawing on the basic income literature, among other sources, Goodin identifies three such key conditions.\(^6\) First, he says, post-productivists ‘want income adequacy’. That concern is by no means unique of course, and it would be reflected in the regime’s generosity towards non-earners, and its capacity to avoid income poverty. However, what is unique is that a post-productivist regime would grant these generous benefits to the non-productive without pressurizing them to re-enter the labour market. This is motivated in part by the second concern. For post-productivists, Goodin says, also want temporal adequacy, because individual autonomy, whatever else it requires, certainly requires people to possess discretion in the use of their time. Temporal adequacy is rather difficult to measure. But indirectly, a concern with this dimension of post-productivism should show up in high rates of part-time work, performed voluntarily, low average hours performed by people of working age, as well as low average time spent in the household’s essential tasks of care and maintenance, and also in a high rate of voluntary non-employment (as opposed to official unemployment including ‘discouraged workers’, disability or illness). Finally, post-productivists want both income adequacy and temporal adequacy ‘to be provided in a way which involves minimal conditionality’. What


that means, in the extreme, is best captured by the notion of a fully unconditional basic income at a society’s level of subsistence, provided to all adult citizens and permanent residents. Of course, no such unconditional income exists even in the Netherlands. Thus, a country’s placement on this third dimension of post-productivism should again reveal itself indirectly in other (income) variables, and surely also in the proportion of the labour force tied up in various active labour market or workfare programmes.

Goodin has only provided a sketch of how these intuitive dimensions of post-productivist policy concerns might be operationalized for comparing the performance of countries in the Organization for Economic Co-operation and Development (OECD) in terms of actual policy outputs. In doing so, he has focused on a combination of work–welfare variables that is thought-provoking and worth exploring further. To provide such an exploration is the aim of this article. This is a modest aim as far as the empirical basis is concerned. At this stage, we have not attempted to go beyond the snapshot provided by the 1993 data of Goodin’s contribution. But even with such restricted data, the issue of identifying dimensions of post-productivism empirically can be addressed by looking at the theoretical structure of the concept in some detail. In Section 2, we present a dataset of thirteen OECD countries for 1993, and first use it to reconfirm that the Netherlands indeed stands out as an exemplar of post-productivism, in terms of the work–welfare variables identified by Goodin. This provides the background of our main task. We suggest that depending on the kind of question asked, post-productivism can be construed either as a comprehensive or as a restricted concept. Both are implicit in Goodin’s presentation, but need to be distinguished. In what we call the comprehensive concept, post-productivism figures as an ideal of the good life informed by the notion of personal autonomy. As such, it combines the three concerns of time adequacy, income adequacy and absence of work–welfare conditionality. In Section 3, we define four policy output variables and argue that they express these concerns for operational purposes. We then show that the data allow the four variables to be summarized by two dimensions of post-productivism: ‘freedom from paid work’ and ‘disposable time’. Using this operationalization of the comprehensive concept, we compare the extent to which each of the thirteen OECD countries approximates the autonomy ideal, as evidenced by their respective scores on each dimension. It will be seen that the Netherlands easily emerges as the top performer. The leading question addressed by the comprehensive concept of post-productivism is to see how different countries measure up in terms of the autonomy ideal, without necessarily implying that those who fail to do so are ‘productivist’.

However, one may look at post-productivism in a closely related, but analytically distinct way. For at the outset of his article Goodin introduces the concept in diametric opposition to ‘productivism’. As we noted above, productivism – that is to say the moral and social value placed on paid work, as well as the willingness to enforce its widespread performance – is exemplified in varying degrees by the liberal, corporatist and social-democratic regimes of Esping-Andersen’s three worlds of welfare. Strictly speaking, this context of comparison is concerned more restrictively with identifying the contrast between the productivist and post-productivist ways of combining work and welfare, while taking for granted that welfare as such – the provision of transfer income to reduce poverty – is a broad goal shared by all welfare state regimes. Likewise, while productivist and post-productivist notions about the importance of paid work in society have quite different implications for desired average hours of employment, as well as for, say, the desired rate of full-time labour participation, both notions share a basic concern
for reducing involuntary underemployment. Taking these bases of agreement as given, we operationalize a restricted concept of post-productivism in Section 4, in terms of three key variables. In contrast to the comprehensive concept, the key variables of the restricted concept deal exclusively with the concerns of time adequacy and work–welfare conditionality, and only indirectly with income adequacy. And it then turns out that the data allow those three variables to be expressed by one single continuum, with low scores for productivist cases and high scores for post-productivist ones. The leading question addressed by the restricted concept of post-productivism, then, is to see to what extent different countries stand divided with respect to a set of controversial normative issues. These have to do with the question of whether welfare states should strive to go beyond the central value of paid work, as Goodin’s provocative slogan ‘welfare without work’ has it, or whether they should continue to pursue this central value.

Section 4 also compares the scores of our thirteen cases on the comprehensive and restricted concepts of post-productivism. Even though the Netherlands ends up at the top of the bill on both measures, the rankings of the other twelve OECD countries differ in some significant respects, depending on the measure used. In Section 5 we discuss our reasons for thinking that the restricted concept is perhaps the one which is most useful for comparative purposes, by identifying some of the contrasting normative standpoints involved in stating a preference for a productivist, or alternatively, a post-productivist set of welfare state arrangements. Finally in Section 6 we list some suggestions for further research. One of those is to investigate further the finding that in our 1993 dataset the scores of countries on both comprehensive and restricted post-productivism are predicted by the very simple ‘work and welfare’ variables of Goodin’s starting point, to which we now turn.

2. POST-PRODUCTIVISM BEHIND THE DYKES?

In this section we spell out the logic of Goodin’s approach and summarize his findings, using the 1993 data for thirteen of the eighteen OECD countries mentioned in his references. We selected the countries on which the numbers of missing values of variables were not too large, or could be obtained from other OECD sources (see the Appendix, Table A2). Austria, Ireland, Japan, New Zealand and Switzerland are omitted here for that reason. Our cases include five Continental European welfare states: Belgium (B), the Netherlands (NL), Germany (D), France (F) and Italy (ITA), four English-speaking welfare states: Australia (AUS), Canada (CAN), the United Kingdom (UK) and the United States (USA), and four Scandinavian welfare states: Denmark (DK), Finland (F), Norway (N), and Sweden (S). These thirteen cases fortunately ensure that the three worlds of welfare are represented rather evenly.

Goodin’s starting point is to compare cases in terms of labour-force participation \( (LPR) \) and social spending as a proportion of gross domestic product \( (SY) \). The purpose of this comparison is twofold. On the one hand, Goodin wants to show that these two variables nicely reproduce the institutional typology of Esping-Andersen’s regime types in terms of policy outputs. On the other hand, he argues that the same variables give at least an initial indication of how to start classifying cases in terms of the post-productivist problematic. One can interpret the rate of labour-force participation as a crude ‘work’ variable, which post-productivists would like to reduce, while at the same time they would want social spending – a crude indicator of ‘welfare’ – to be as generous as possible. Figure 1 gives
the scores on ‘work’ and ‘welfare’ for our thirteen cases and shows how these comparisons work out. These values are also listed in Table A1 in the Appendix.

First, the English-speaking and Scandinavian countries all outrank the Continental ones on labour-force participation, while Continental and Scandinavian countries all outrank the English-speaking ones on social spending. The institutional typology of liberal (English-speaking), social-democratic (Scandinavian) and corporatist (Continental) welfare regimes thus seems to be tracked by this simple work–welfare typing device, at least for 1993. And secondly, the same pattern of rankings between the regime clusters suggests that one should look for signs of post-productivism among the Continental countries, because this category is both ‘relaxed on work’ and relatively ‘generous on welfare’. More precisely, according to this post-productivist interpretation, one would have to say that Continental cases should be ranked above Scandinavian ones, which in turn rank above the English-speaking cases, according to the rule of dominance (see Figure 1).

If this same logic is pursued within the Continental cluster, then it is not that obvious that the Netherlands should be identified as the home of post-productivism, at least in this first and very tentative approximation. For while the Netherlands surely stands out on social spending in 1993, both Italy and Belgium have lower rates of labour-force participation.

Goodin splits the Continental cases into two categories of high-spending countries (here Belgium, France and the Netherlands) and low-spending ones (here Italy and Germany) (see Goodin, ‘Work and Welfare’, p. 20). This subdivision, however, is not relevant as far as the rough characterization of post-productivist criteria is concerned.
As far as one can judge on the basis of the dominance rule, as applied to the twin desiderata of relaxed work and generous welfare (see the values of Table A1), it would seem that these two countries are on a par with the Netherlands.

Next, however, Goodin notes that from a post-productivist point of view, the work and welfare characterization is far too rough. For one thing, labour-force participation rates need to be disaggregated to take account of part-time work. If one looks at percentages of males and females in part-time work, then the Netherlands indeed appears to be a special case, not only within the Continental cluster, but in general. As Goodin shows, both genders are way up in respect to part-time work in this country, and moreover significantly above the trend line relating part-time to total (male or female) employment. Combining these findings with the work–welfare comparisons, then, the performance of the Netherlands on both social spending and rates of part-time work achieved for men and women is definitely more impressive than that of Italy and Belgium, the two Continental countries with especially advantageous profiles of social spending and labour-force participation. This in turn suggests that when (absence of) ‘work’ is measured somewhat less crudely, by taking account of part-time participation in the labour force, the Netherlands, after all, may be the place to look for more definite signs of post-productivism.

After setting the stage in this way, Goodin proceeds to more detailed comparisons in terms of combined policy outputs, following up on the three concerns of post-productivism which were mentioned in Section 1: time adequacy, income adequacy and welfare–work conditionality. These comparisons come in three stages, summarized below, each of which suggests that the Netherlands does indeed rank highest on an intuitive conception of post-productivism.

**Stage 1: Absence of Poverty and Relaxed Working Times**

In comparison to the seventeen other countries included in Goodin’s overview, the Netherlands combines a low rate of poverty ($POVR$) with the lowest annual average of paid working time in the working-age population ($NHP$) and with low weekly averages of paid and unpaid working time among households ($NHT$) as well. This signals the overall best performance of Dutch society on an important aspect of income adequacy, in conjunction with the post-productivist concern for free time, where the latter is measured both in terms of time off from paid work and time off from household work.

**Stage 2: High Non-employment and Part-time Employment, and Both Are Voluntarily Chosen**

Of the working-age population, the Netherlands first of all has the highest proportion of part-time workers in the working age population ($PTP$). And of these workers, the proportion ($VPT$) engaged in voluntary part-time work (i.e. those who indicate that they would not prefer a full-time job) is well above the mean. Secondly, the Netherlands does not have the highest share of non-employed persons ($NER$). Nor does it have the highest ratio ($VNE$) of voluntarily non-employed persons (i.e. those who do not show up as either.

---

8 Goodin, ‘Work and Welfare’, Fig. 3 and Fig. 4. Our own data certainly confirm this conclusion.
9 Goodin, ‘Work and Welfare’, pp. 27–31, Fig. 5 and Fig. 6. The variables whose names are mentioned in brackets in our three-stage exposition are further defined in Table A2 of the Appendix.
unemployed or as ‘discouraged’ workers) to non-employed ones. However, both of these ratios are well above the eighteen-country mean. Goodin concludes that on these four indicators of time adequacy which jointly capture the part of the working-age population that chooses to avoid the productivist ‘default option’ of full-time work, the Netherlands comes out on top.\(^{10}\)

**Stage 3: Low Pressure to Perform Paid Work**

Finally, the Netherlands stands out on the post-productivist concern for work–welfare unconditionality. Comparing the share of the labour force enrolled in active labour market programmes (ALMP), the Netherlands scores at the bottom, together with the United States. This shows that these two countries do not exert a lot of pressure on their labour force by applying policy measures of ‘insertion’ to those without current employment. However, very unlike the United States, the Netherlands has one of the highest ratios of non-worker disposable household income to median equivalent income (YNW), together with France and some Scandinavian countries. These high scores on this measure of income adequacy – a measure capturing support for families outside of the domain of paid work – also have implications for the post-productivist concern with work–welfare conditionality. For in countries with high YNW, it is easier to avoid the search for employment, hence such countries do not exert a lot of economic pressure on their labour force. Now the Netherlands, which combines a very low value of ALMP with a value of YNW well above the mean, is the only country which refrains from applying labour-market pressure in both of these respects, policy-driven and economic.\(^{11}\) Goodin therefore concludes that compared to other OECD members, the Dutch are most responsive to the post-productivist concern of welfare–work unconditionality.

In each of the three stages of this exposition the Netherlands appears to be the prize-winning candidate for the title of a post-productivist society, irrespective of whether Dutch labour-market and social programmes were actually crafted to achieve this remarkable result. There is, as Goodin shows, quite some evidence that policy efforts in the Netherlands during the early 1990s were rather explicitly devoted to strengthening the ties to the labour market and to reducing welfare expenditure. As remarked earlier, however, comparing countries along post-productivist desiderata does not take policy intentions or programme designs into account. It relies exclusively on what those programmes and policies actually achieve in terms of these desiderata.

In conclusion of this section, then, it may be asked whether Goodin’s main findings concerning the special position of the Netherlands is confirmed for our complete dataset of thirteen OECD countries, in view of the fact that his larger sample of cases contains many missing values. As inspection of Table A2 in the Appendix may show, the results of the three stages mentioned above do indeed stand up. But since the method of comparison on which the results are based is somewhat roundabout, we shall now try to work towards a more economical way of operationalizing post-productivism.

\(^{10}\) Goodin, ‘Work and Welfare’, pp. 31–5, Fig. 7 and Fig. 8.

\(^{11}\) Goodin, ‘Work and Welfare’, pp. 35–6, Fig. 9.
3. COMPREHENSIVE POST-PRODUCTIVISM: FREEDOM FROM PAID WORK AND DISPOSABLE TIME

Before a more systematic comparison of cases is undertaken, it is wise to reflect on different ways of understanding the concept of post-productivism. In Section 1 we proposed to look at a comprehensive and a restricted version of the concept. The first of these will be discussed in this section. In the full sense of the word, post-productivism is meant to reflect an ideal of a society devoted to promoting personal autonomy, the fulfilment of which can be read off from certain policy outputs of welfare states. In this, we follow up on Goodin’s basic understanding, as presented in the three-stage exposition of the last section. However, we propose to operationalize comprehensive post-productivism using only four key variables. How these are argued for is explained below, and the exact definitions are provided in the Appendix. From these key variables, we then isolate two latent dimensions of comprehensive post-productivism by means of a principal component analysis, and take the factor regression scores of the two principal components as a two-dimensional measure.

The best way of developing our simplification proposal is to revisit the three stages of Goodin’s exposition and suggest modifications along the way. Our comment on the first stage concerns the time-use variables. Regarding annual average hours of paid work, it is perhaps better to take the average performed by the employed than the average across the population of working age, as Goodin does (NHP in Table A2). There are two reasons for this. Conceptually, what is indicative of time adequacy, as far as individual time-use is concerned, is the amount of time spent working in a given period by those who decide to perform paid work, or are, as it happens, under economic or policy pressure to do so. Time adequacy is captured only inaccurately by the average of time in paid work spread out over everyone between 15 and 65, including those who are excluded from employment or who do not want to be employed. The other reason is methodological. The average of annual hours performed by people of working age is a composite of two of the underlying OECD statistics. It is the product of average annual hours per year per employee and the rate of employment (NH × ER, see the Appendix). The trouble with this is that the employment rate – the proportion of employed in the working-age population – is the reverse of one of Goodin’s other measures of time adequacy, namely the proportion of non-employed working-age persons (NER, i.e. (1 − ER) in Table A2). As we have shown, that particular variable figures in the second stage of his exposition concerning the special position of the Netherlands. Since our intention is to identify various independent variables indicative of postproductivist concern and subject these to a data reduction process, it is necessary to avoid such artificial correlations. For these reasons, our first key variable will be average annual hours per year per employee (NH), but subtracted from a standard maximum of 2000 hours per year. We shall call this variable RNH, the ‘reverse of average working hours’. Post-productivists desire low hours of paid work, so they naturally welcome high scores on RNH.

Goodin’s other variable of time-use in stage 1 measures the weekly amount of paid and unpaid work performed on average by a working-age couple (NHT in Table A2). In effect he takes the reverse of NHT as an indicator of time adequacy. We have two reasons for wanting to omit this variable altogether, apart from the problem of artificial correlation between RNH and NHT. Conceptually, it is not immediately clear that reducing the average of paid and unpaid hours in the household always promotes temporal autonomy for the relevant people in the household. For example, depending on one’s views on what adults owe their children in respect of becoming autonomous persons, it might be argued that
reducing aggregate hours by cutting down on essential tasks of raising children, while also spending more time in well-paid professions, is undesirable.\footnote{As argued strongly by A. Alstott, \textit{No Exit: What Parents Owe Their Children and What Society Owes Parents} (New York: Oxford University Press, 2004), chap. 3.} As we understand it, the post-productivist problematic considers the pressure on the working-age population to spend large amounts of time earning income to be one of the main impediments of personal autonomy. Post-productivists are worried about the predominance of paid work. They are certainly less concerned to eliminate unpaid work of care and maintenance. So to the extent that certain forms of unpaid work are important for purposes of comparing welfare states in terms of time adequacy, it is perhaps better to include the relevant variables separately in a more refined concept of post-productivism. A second reason for dropping the \textit{NHT} variable is that the data for our thirteen countries computed by Goodin are very widely dispersed over time (see the sources cited in the Appendix, Table A2). It may thus be doubted whether these observations are sufficiently accurate for picturing the situation in 1993.

Moving now to the second stage of Goodin’s exposition, we propose to reduce the number of variables concerned with the share of the working-age population which chooses not to be employed full-time. From the account of the second stage, it is fairly obvious that what really counts for post-productivists is to achieve high shares of voluntary part-time work and of voluntary non-employment.\footnote{In terms of the variables of Table A2, those two shares are simply the products $PTP \times VPT$, and $(1 - ER) \times VNE$, respectively.} Moreover, since high shares of voluntary part-time employment and voluntary non-employment are both considered desirable from the post-productivist point of view, and neither of the two is preferred to the other, one can simply take their sum as the relevant measure of time adequacy. Thus we end up with a second key variable, the proportion of voluntarily underemployed in the working-age population. Let us call it ‘the rate of voluntary underemployment’ (\textit{VU}). The numerator of \textit{VU} is simply the working-age population minus the sum of the full-time employed, the unemployed, the discouraged workers and the involuntary part-time workers. Notice that the desirability of high \textit{VU}-scores indirectly reflects the judgement of the post-productivist problematic referred to above, concerning the autonomy-reducing effects of the predominance of paid work. For the desire to keep down the share of full-time workers in the population suggests that full-time work, whether performed voluntarily or not, does not contribute to personal autonomy.\footnote{Do post-productivists think that in order to enjoy personal autonomy, a person should never be working full time, however voluntarily? We do not think that this untenable position is implied by the judgement referred to above. The post-productivist position is rather that high proportions of voluntary part-time work and unpaid activity are indicative of a society in which people truly have the freedom of choice to use time as they wish, and actually exercise that freedom, whereas high proportions of full-time work are not indicative of such a state of affairs. Of course, if one supposes that temporal freedom of choice is maximal in all welfare states, then there is no good reason for thinking that high proportions of voluntary part-time workers and/or unpaid activity must show that people are allocating their time as they wish. But post-productivists do not suppose this. They hold that by and large, the default position for the working population is full-time paid work, and that a lot of pressure is applied to enforce the default position. It does not follow from this that full-time work cannot be conducive to personal autonomy.}

In the third and final stage of his exposition, Goodin regards welfare–work unconditionality, the third of post-productivism’s basic concerns, as the absence of both policy and economic pressure on people of working age to enter the labour market and remain employed. As noted earlier, high scores on inflow of active labour-market
programmes – variable \textit{ALMP} – signal high policy pressure, whereas high scores on the ratio of disposable equivalent income to median income – variable \textit{YNW} – indicate low economic pressure. One way of making this neat suggestion more precise is to construct an index of unconditionality (\textit{IU}). \textit{IU} is defined by the standardized (z-score) average of the standardized scores of \textit{YNW} and $1 - \textit{ALMP}$. This index is our third key variable. It has a zero mean and a standard deviation of unity. Thus ‘\textit{IU} = -1’ means that the country concerned is one standard deviation below the mean, that is to say it exerts more labour-market pressure than the average case, and thus shows up poorly in terms of welfare–work conditionality. Likewise, ‘\textit{IU} = 2’ says that the country concerned is two standard deviations above the mean, therefore exerts much less labour-market pressure than the average case and thus amply satisfies the unconditionality desideratum, at least compared to the other countries.

What remains after these operations is to include a measure of income adequacy among the key variables that constitute the concept of comprehensive post-productivism. In Goodin’s approach, both the poverty rate (\textit{POVR}), which figures in the first stage, and the ratio of equivalent non-worker household income to median income (\textit{YNW}), which figures in the third stage, are indicators of income adequacy. But as the latter has just been integrated into the index of unconditionality, we choose to define our fourth and final key variable as the ‘reverse of the poverty rate’ (\textit{RPOVR}), that is to say the percentage of people not qualifying as poor. With this final step, then, we have included the different elements of the three-stage exposition in a simplified form. The first four columns of Table 1 show the values of the four key variables, the descriptions of which are listed in the footnote to the table.

It is easy to conclude from Table 1 that the Netherlands stands out as the overall best performer on these constituents of comprehensive post-productivism, with top scores on

\begin{table}
\centering
\caption{Key Variables and Dimensions of Comprehensive Post-Productivism}
\begin{tabular}{lllllll}
Country & \textit{VU} & \textit{IU} & \textit{RNH} & \textit{RPOVR} & \textit{FPW} & \textit{DT} \\
NL & 0.483 & 1.636 & 596 & 0.939 & 2.029 & 0.989 \\
D & 0.383 & 0.593 & 408 & 0.909 & 0.480 & 0.003 \\
F & 0.381 & 1.377 & 366 & 0.932 & 0.688 & 0.275 \\
S & 0.361 & -0.114 & 493 & 0.933 & 0.025 & 0.792 \\
N & 0.393 & 0.113 & 585 & 0.944 & 0.518 & 1.242 \\
DK & 0.292 & -1.360 & 432 & 0.950 & -1.308 & 1.068 \\
UK & 0.385 & 1.228 & 283 & 0.883 & 0.679 & -0.923 \\
USA & 0.371 & -0.987 & 222 & 0.829 & -0.922 & -1.945 \\
CAN & 0.345 & -0.320 & 281 & 0.911 & -0.489 & -0.280 \\
AUS & 0.357 & -1.520 & 118 & 0.905 & -1.189 & -0.899 \\
FIN & 0.270 & -0.445 & 256 & 0.951 & -1.360 & 0.515 \\
ITA & 0.413 & 0.107 & 318 & 0.858 & 0.536 & -1.284 \\
B & 0.425 & -0.310 & 397 & 0.936 & 0.314 & 0.445 \\
Mean & 0.369 & 0 & 366 & 0.914 & 0 & 0 \\
s.d. & 0.057 & 1 & 140 & 0.037 & 1 & 1 \\
\end{tabular}
\begin{flushleft}
\textbf{Note:} \textit{VU}: rate of voluntary underemployment. \textit{IU}: index of (welfare–work) unconditionality. \textit{RNH}: 2000 minus average hours per employee per year. \textit{RPOVR}: 1 minus the poverty rate. Definitions in terms of underlying statistics are given in the footnote to Appendix Table A2. \textit{FPW}: dimension of freedom from paid work (see text). \textit{DT}: dimension of disposable time (see text).
\end{flushleft}
\end{table}
VU, IU and RNH, and fourth best on RPOVR, behind the Scandinavian countries. So, in terms of the key variables, Goodin’s results concerning the Netherlands are once again vindicated. However, to judge the relative performance of the other twelve countries is less easy, even though it can be seen, for example, that Norway is quite a good performer as well, and that the liberal countries outside of Europe (notably the United States and Australia) are far removed from the ideal of comprehensive post-productivism, comparatively speaking. We now show that a principal component analysis can point towards more definite conclusions without too much loss of information.

A principal component analysis shows whether one or more latent dimensions (‘components’) can be extracted from a group of variables, by taking account of how those variables happen to be intercorrelated in a given dataset. In order for this to be an empirically meaningful exercise, the variables should not be intercorrelated by virtue of definitional interdependencies. We have tried to ensure that this requirement is met by defining each of the key variables of comprehensive post-productivism independently from the others, that is to say in terms of distinct underlying statistics. Our four key variables are positively intercorrelated, with strong correlations between IU and VU, and between RNH and RPOVR. This allows for the extraction of two components which jointly explain 84 per cent of the variance in the data. IU and VU have highest loadings on Component 1, and both are positive. RNH and RPOVR have highest loadings on Component 2, and both are positive. This indicates that the two components can be regarded as two distinct latent dimensions of comprehensive post-productivism. These dimensions now need to be given a substantive interpretation. Given the nature of the key variables that are generated by each principal component, we interpret Component 1 as the dimension that expresses the extent to which people are unpressured by economic necessity or political directives to enter the domain of paid work (IU) and actually engage in activities (part-time or full-time) outside of that domain by their own choice, that is to say without being involuntarily underemployed (VU). Call this dimension freedom from paid work (FPW). Component 2 may be interpreted as the dimension that captures the extent to which working people are in possession of spare time for unpaid work or leisure (RNH), without falling into poverty (RPOVR). Call this the dimension of disposable time (DT).

Having interpreted the two dimensions, the full concept of post-productivism is operationalized by taking the factor regression scores (these are z-scores) on each corresponding component. The values of the factor regression scores of dimensions FPW and DT are given in the two last columns of Table 1. The scattergram of Figure 2 places the thirteen cases on each dimension.

Because the dimensions of freedom from paid work and disposable time are largely independent, it follows that some cases score similarly on both, while other cases score in more or less opposite ways. Figure 2 shows that the Netherlands and Norway are the best performers in the first category, with the United States and Australia the worst ones. It is also clear from the last two columns of Table 1 that the Netherlands and the United States may be considered to be the most extreme cases, with the former placed at two

---

15 This holds for the oblique (direct oblimin) and orthogonal (varimax) rotations. The former rotation method, which allows principal components to be correlated is empirically most defensible for our purposes. Components 1 and 2 are correlated only weakly ($r = 0.216$). The loadings of VU, IU, RNH and RPOVR on Component 1 are 0.927, 0.887, 0.490 and −0.154, and on Component 2 = 0.066, 0.003, 0.665 and 0.978 respectively in the ‘pattern matrix’. The analysis was run in SPSS 11.5.
standard deviations above average on \( FPW \) and almost one on \( DT \), and the latter located at almost two standard deviations below average on \( DT \) and just over one standard deviation on \( FPW \).

The second category of cases shows that there are two ways of not entirely measuring up to the ideal of comprehensive post-productivism. Italy and the United Kingdom perform (moderately) well on \( FPW \), but badly on \( DT \), while Denmark and Finland perform well on \( DT \), but badly on \( FPW \). The remaining five countries, Sweden, Belgium, France, Germany and Canada, belong to a middle group, with Canada performing below the four European cases. We conclude that our operationalization is a useful way of explicating the notion of comprehensive post-productivism in terms of the underlying OECD statistics.\(^{16}\)

But for some comparative purposes, there are conceptual reasons in favour of a more discriminating notion of post-productivism. These are discussed in the next section.

4. THE RESTRICTED CONCEPT: ‘PRODUCTIVISM VERSUS POST-PRODUCTIVISM’

An obvious rationale for seeking a one-dimensional measure of post-productivism was mentioned in Section 1. The very notion of ‘post-productivism’, considered as a normative

\(^{16}\) The locations of cases in Figure 1 are validated informally by looking at the respective values of the cases on the key variables of Table 1. For example, compare the Netherlands with the United States, and Denmark with Italy. While the factor scores of the two principal components cannot fully reflect these country differences (because the two components only explain 84 per cent of the variance, and the key variables do not have a perfectly ‘simple structure’ of loadings in the rotation chosen), the accuracy of the two dimensions is satisfactory.
stance with respect to desirable policy outputs of welfare regimes, naturally imposes a contrast between a productivist perspective (which stresses the central value of paid work both as a ‘way of life’ and as the chief means of achieving economic self-reliance) and a post-productivist one, which defines itself in opposition to these concerns for reasons connected to the central value of personal autonomy. For purposes of comparing Esping-Andersen’s institutional typology in terms of the post-productivist problematic, this contrast is important, because in different ways, and to different degrees, the ‘three worlds of welfare’ embrace the values of productivism.¹⁷

Now there are two reasons why our measure of comprehensive post-productivism does not satisfactorily express this normative contrast. These reasons are empirical and conceptual. On the empirical side, the data just do not allow for a one-dimensional representation, given the intercorrelations of the four key variables $VU$, $IU$, $RNH$ and $RPOVR$. It is possible to simply ignore this, and proceed to construct a summary index of comprehensive post-productivism, defined as the $z$-score average of the factor regression scores on the $FPW$ and $DT$ dimensions. But since a summary index lumps together countries such as social-democratic Denmark and the more liberal United Kingdom that perform well on one dimension and badly on the other in opposing ways, this does not seem the most informative way of comparing cases.¹⁸

Of course, it might be that in a different dataset, for example one consisting of the same thirteen countries for, say, 1985 or 2000, instead of 1993, the intercorrelations of the four key variables would actually produce a measure of comprehensive post-productivism along one single dimension.¹⁹ Even then, there would be a conceptual reason for rejecting such a measure as an adequate way of capturing the contrast between productivist and post-productivist ways of combining work and welfare. As we mentioned in Section 1, this is because the notion of comprehensive post-productivism exclusively aims to capture an ideal of a society devoted to promoting personal autonomy. In the present context, the trouble with this ideal perspective is that the conditions for achieving autonomy, as spelled out in terms of time adequacy, income adequacy and welfare–work unconditionality, necessarily include some conditions which are valued generally in welfare states, quite apart from their connection with personal autonomy. In particular, social programmes in welfare states of whatever stripe naturally try to combat poverty to some extent. Likewise, labour market policies in almost every welfare state are (at least partly) judged by how well they manage to avoid involuntary underemployment, most notably unemployment. Thus if one wants to capture the normative contrast under discussion, one should not let post-productivism appear as the sole champion of these two general concerns, since productivists can wholeheartedly agree on their importance.

This conceptual point suggests a restricted concept of post-productivism, constructed exclusively to capture the aspects of work and welfare on which productivists and

¹⁷ Note that we do not have at our disposal the 1993 data on the institutional measures of social-democratic, liberal and Continental (corporatist) regimes, as developed by Esping-Andersen. Instead, the three worlds of welfare are typified by Goodin’s ‘work and welfare’ tracking device of Figure 1.

¹⁸ Below, however, we do introduce the summary measure, and it can be seen in Table 2 that rather different cases such as Denmark and the United Kingdom then end up with virtually the same score (0.155 standard deviation below the mean). However, the use of the summary index there serves the limited purpose of comparing comprehensive post-productivism to the one-dimensional alternative measure of restricted post-productivism which we shall be proposing shortly.

¹⁹ Preliminary results on data for 1985 and 2000 show, however, that the two-dimensional format of full post-productivism remains intact.
post-productivists disagree most intensely. Given the four key variables of comprehensive post-productivism, the restricted version of the concept can be arrived at in two steps. The first of these, obviously, is to retain the unconditionality and time-use variables $IU$ and $RNH$, but delete the poverty variable $RPOVR$. The second step is to refashion variable $VU$, the ratio of voluntarily underemployed to the working-age population, by bracketing out the consensus element concerning the involuntarily underemployed. This can be done by dividing the number of voluntarily underemployed by the working population minus the number of involuntarily underemployed. This last ratio is called the ‘corrected rate of voluntary underemployment’ ($VUC$). It replaces $VU$ as indicator of time adequacy in our restricted concept. Diehard post-productivists desire to maximize $VUC$ within the limits of sustainability, for on the whole they regard a large share of full-time employment as inimical to personal autonomy. Confirmed productivists, who are committed to enlist the able-bodied in full-time income-earning occupations, strive to minimize $VUC$.

To sum up, the broad normative contrast that we aim to capture by means of the restricted concept is expressed by noting first that productivists and post-productivists both seek to avoid poverty and involuntary underemployment. But, secondly, productivism wants to mobilize the working-age population in full-time employment, at long average hours, and is happy to apply labour-market pressure for achieving these goals. By contrast, post-productivism wants to mobilize the working-age population in either voluntary part-time work or freely chosen activities outside of the labour force, and seeks to limit the working hours of those who are engaged in paid work. It aims to minimize labour-market pressure in order to achieve these goals, and this is in conformity with its wish to minimize work–welfare conditionality. Underlying this broad contrast are several distinct normative controversies, which we shall be discussing in the next section.

The key variables of restricted post-productivism, then, are $VUC$, $IU$ and $RNH$. In the data they are rather closely intercorrelated, and this allows for the extraction of one single component explaining 69 per cent of the variance. We take the factor regression scores of the component as our index of restricted post-productivism ($RPP$). Table 2 gives the values for the cases on the key variables and $RPP$. It also includes a summary measure of comprehensive post-productivism ($CPP$), which will be discussed below.

As the $RPP$ column of Table 2 shows, productivism is especially at home in the United States, Australia, Finland and Denmark (well over, or barely one standard deviation below the mean). The Netherlands remains the natural habitat of post-productivism once that notion is construed restrictively (well over two standard deviations above the mean). Norway follows at some considerable distance, as the best performer of a large intermediate group with scores less than one standard deviation removed from the mean, and including Canada as the worst performer. Taking this three-way statistical split as reference, it appears first that no liberal or social-democratic welfare state is in the top category, no Continental welfare state ends up in the bottom one, and the intermediate category contains all three worlds of welfare. Secondly, while restricted post-productivism is decidedly a European phenomenon, its opposite, productivism, is certainly not limited to Europe.

To conclude our account of the two concepts of post-productivism, it may be asked whether it makes much of a difference how one decides to measure the phenomenon, comprehensively or restrictively. In order to answer that empirical question, one needs to

---

20 The first component of the solution has an eigenvalue of 2.065, against 0.586 for the second component, which can thus be ignored. The loadings on $VUC$, $IU$ and $RNH$ are 0.859, 0.865 and 0.760 respectively.
**Table 2**  
*Key Variables and the Index of Restricted Post-Productivism*

<table>
<thead>
<tr>
<th>Country</th>
<th>VUC</th>
<th>IU</th>
<th>RNH</th>
<th>RPP</th>
<th>CPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL</td>
<td>0.532</td>
<td>1.636</td>
<td>596</td>
<td>2.177</td>
<td>1.936</td>
</tr>
<tr>
<td>D</td>
<td>0.413</td>
<td>0.593</td>
<td>408</td>
<td>0.358</td>
<td>0.309</td>
</tr>
<tr>
<td>F</td>
<td>0.428</td>
<td>1.377</td>
<td>366</td>
<td>0.687</td>
<td>0.617</td>
</tr>
<tr>
<td>S</td>
<td>0.404</td>
<td>-0.114</td>
<td>493</td>
<td>0.213</td>
<td>0.524</td>
</tr>
<tr>
<td>N</td>
<td>0.429</td>
<td>0.113</td>
<td>585</td>
<td>0.737</td>
<td>1.129</td>
</tr>
<tr>
<td>DK</td>
<td>0.340</td>
<td>-1.360</td>
<td>432</td>
<td>-0.944</td>
<td>-0.154</td>
</tr>
<tr>
<td>UK</td>
<td>0.430</td>
<td>1.228</td>
<td>283</td>
<td>0.422</td>
<td>-0.156</td>
</tr>
<tr>
<td>USA</td>
<td>0.344</td>
<td>-0.987</td>
<td>222</td>
<td>-1.313</td>
<td>-1.839</td>
</tr>
<tr>
<td>CAN</td>
<td>0.395</td>
<td>-0.320</td>
<td>281</td>
<td>-0.498</td>
<td>-0.493</td>
</tr>
<tr>
<td>AUS</td>
<td>0.416</td>
<td>-1.520</td>
<td>118</td>
<td>-1.270</td>
<td>-1.339</td>
</tr>
<tr>
<td>FIN</td>
<td>0.327</td>
<td>-0.445</td>
<td>256</td>
<td>-1.123</td>
<td>-0.542</td>
</tr>
<tr>
<td>ITA</td>
<td>0.454</td>
<td>0.107</td>
<td>318</td>
<td>0.219</td>
<td>-0.480</td>
</tr>
<tr>
<td>B</td>
<td>0.465</td>
<td>-0.310</td>
<td>397</td>
<td>0.336</td>
<td>0.487</td>
</tr>
<tr>
<td>Mean</td>
<td>0.414</td>
<td>0</td>
<td>366</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>s.d.</td>
<td>0.056</td>
<td>1</td>
<td>140</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note:* VUC: rate of voluntary underemployment corrected for involuntary underemployment. IU: index of (welfare–work) unconditionality. RNH: 2,000 minus average hours per employee per year. Definitions in terms of underlying statistics are given in the Appendix. RPP: index of spare post-productivism. CPP: summary index of comprehensive post-productivism (see text).

make the two measures comparable. Thus, for this limited purpose, we shall now collapse the two dimensions of comprehensive post-productivism (FPW and DT) into a summary index, taking aboard the inevitable loss of information that this involves. As mentioned earlier, this summary index (denoted by CPP) is simply defined as the standardized average of the factor regression scores on FPW and DT, and it thus has a zero mean, and a standard deviation of unity, just like RPP, the index of restricted post-productivism. The values of CPP are included in the last column of Table 2. The scattergram of the two indices is given in Figure 3.

The two indices are highly correlated ($r = 0.9$), yet the correlation is not perfect. Ignoring inevitable distortions induced as a result of representing cases by their scores on principal components, systematic deviations are due to the differences in country scores on the constituent variables: VU in the comprehensive concept and VUC in the restricted one. The presence of variable RPOVR in the comprehensive concept, and its absence in the restricted one, also accounts for those differences. Other things equal, this last cause makes for a relatively poor (good) performance on restricted post-productivism for countries with relatively low (high) poverty rates, as compared to the summary index of comprehensive post-productivism. As Table 2 shows, this can explain why the gap between Norway and the Netherlands is larger on the restricted concept than on the comprehensive one and, on the other side of the ledger, why the gap between the United States and Australia almost vanishes: both countries are equally productivist, and that has nothing to do with their respective (and discernibly different) rates of poverty. It is also seen that Italy, with an above-average poverty rate, ranks above almost poverty-free Denmark on restricted post-productivism, whereas the ranking is decidedly reversed on the comprehensive measure. The same goes for the (less pronounced) ranking reversal of Sweden and the
United Kingdom. The second cause of systematic difference – VUC versus VU – is arguably of less importance. Other things equal, it makes for a better (worse) showing on restricted post-productivism than on comprehensive, for countries whose rate of involuntary underemployment is relatively high (low). It is difficult, however, to isolate clear instances of this effect in Figure 3. Summing up, the scores on our two measures of post-productivism are sufficiently distinct to justify their use for the different purposes that were outlined above.

5. PRODUCTIVISM VERSUS POST-PRODUCTIVISM: NORMATIVE ISSUES

We have argued that the restricted concept of post-productivism is most suitable for purposes of comparing welfare states, as grouped into the regimes of the ‘three worlds’. Prescinding from the two goals that are shared widely within all welfare states, the concept focuses on the policy outputs on which intense disagreement may exist. In this section, we want to examine some of the main issues that lie behind that disagreement. Before doing so, however, we address an important preliminary question. Whatever may be said for or against a post-productivist welfare state, it is important to know first how such a welfare state performs in terms of the two desiderata on which both sides in the debate agree: the

---

21 It can be argued that Finland and Italy, with the highest rates of involuntary underemployment (0.23 and 0.15, as computed from the UD and IPT columns in Table A2 in the Appendix respectively) show up better on restricted than on comprehensive post-productivism for that reason. In the case of Finland, however, this is counteracted by the poverty rate effect (Finland has a low rate of poverty), whereas in the case of Italy both effects work in the same direction.
avoidance of poverty and the reduction of involuntary underemployment. It is one added advantage of restricted post-productivism, we think, that it naturally raises this question.

As mentioned in Section 2, our analysis is limited to a cross-section of only thirteen OECD countries for 1993. Thus, in order to see how countries perform with respect to the preliminary issue, we can do no more than present some simple statistical evidence. We correlate the index of restricted post-productivism with the poverty rate, and with the proportion of involuntary underemployment in the labour force (this is the sum of the rate of unemployed and discouraged workers \(UD\), and the rate of involuntary part-time employment \(IPT\) shown in Table A2 of the Appendix). These two correlations turn out to be negative, \(r = -0.271\) (n/s), and \(r = -0.555\) (\(p < 0.05\)) respectively.

That restricted post-productivism is not positively correlated with the poverty rate should perhaps not come as a surprise. Given the strong association existing between \(RPP\) and \(CPP\), the summary index which actually includes the reverse of the poverty rate, it would be somewhat strange to find evidence of that sort (see Figure 3). Yet it cannot be affirmed that restricted post-productivism and absence of poverty go together in this limited dataset. Reassuring for post-productivists, though, is the substantial and significant negative correlation of \(RPP\) and the rate of involuntary underemployment. It suggests something that is far from obvious: productivist countries are more likely to suffer from involuntary underemployment than post-productivist ones are (31 per cent of the variation in involuntary underemployment scores is explained by the \(RPP\)-score). Whether this result also holds in comparisons across welfare states for different years after 1993 remains to be seen.

The post-productivist problematic is guided by the belief that if an affluent society were to grant people a high level of personal autonomy through its labour-market institutions and welfare system, then by and large most would choose to work less and earn less. This, indeed, is the thought behind Goodin’s slogan of ‘welfare without work’. Our comparative exercise so far suggests that there is evidence for that intuition, as may be seen by reflecting on the causal mechanism underlying the index of restricted post-productivism. One way of explaining why the key variables of \(RPP\) hang together sufficiently in our data to be represented on a single dimension is to say that within an imaginary (statistically representative) country, a substantial decrease in both policy-driven and economic labour-market pressure – thus an increase in the index of unconditionality – makes it possible for workers to reassess their work–income and free time mix. It then turns out that many of them will respond by working less and earning less than they otherwise would. That many people do respond in this way can be seen from the increase in the rate of voluntary underemployment which would ensue in the representative country, and the decrease of average annual hours per employed, after controlling for poverty and involuntary underemployment.

The question is how one should judge such a behavioural response. From the post-productivist point of view, it is obviously a good thing. It signifies that many people are using the freedom of choice afforded by more unconditionality to move in directions which, as autonomous persons, they have reasons to prefer. That they prefer to trade income above the guaranteed poverty threshold level against free time only shows that

\[22\] It would also be good to know whether pursuing post-productivist goals rather than productivist ones imposes the price of losing out in the global economy. In particular, it is usually thought that hard work and self-reliance through the market will better promote international competitiveness, productivity and economic growth than a strong focus on disposable time supported by welfare provisions will do. We are not in a position to address this general issue here.
the domain of paid work holds less attractions for them than productivists tend to assume. However, there is another side to the story. For obviously there must also be people who do not respond to the increase in the index of unconditionality by working less. As Goodin (cited in Section 1) has it: ‘Like everyone else, post-productivists need enough people to work in the productive sectors of the economy to finance public transfers to those who do not.’ The policy shift we are here envisaging in our representative country can take place in many ways, varying from waiving the duty to apply for jobs for older unemployed workers and for single-parent households with young children, the instalment of paid parental care allowances and early retirement schemes to more generous out-of-work benefits. Since all these measures have in common that they support the choice for intermittent periods of non-paid activity by public means, this raises the question why those who happen to desire lifelong full-time work in the ‘productive sectors’ would have the obligation to pay for others who wish to take advantage of the options provided by a post-productivist welfare state.

This is a familiar issue of distributive fairness, which has been extensively discussed in the basic income debate under the rubric of the Crazy–Lazy challenge: granting an unconditional income to all adult citizens would be an unfair way of subsidizing the preferences of the (presumed) ‘lazy’ at the expense of those with (perhaps ‘crazily’) industrious preferences.23 Clearly, the rejoinder that under a post-productivist regime these industrious full-time workers, too, may have a better choice to opt out of paid work is hardly convincing. For the point is precisely that they, being autonomous persons just as everyone else, have their own reasons to stay inside of the domain of paid work, and thus they may feel unfairly treated if the policy shift towards unconditionality imposes public costs on them through taxation. This is why, in that long-standing debate, the key principled defence of the basic income proposal has been cast in the form of an argument that basic income justly redistributes a material condition of individual autonomy, to wit, an income–leisure opportunity set, in favour of those whose endowments are worth less on the market, and at the expense of those with superior productive endowments for whom the incentive to trade income against time off from relatively well-remunerated paid work is naturally less prominent. Thus the objection of distributive unfairness against basic income is countered by an argument of egalitarian distributive justice in its favour.

We do not want to enter into the details of this theoretical discussion here, except to say that it has not been settled conclusively to date. The main reason is that egalitarians who share the concern for redistributing income–leisure opportunities to the least productive can think of alternative schemes of taxation and redistribution which involve wage subsidies and job-related training facilities instead of a basic income. Such schemes would compensate for low market earning power by granting workers opportunities to earn more during their lifetimes, net of tax and subsidy, but only at the same amount of actual work performance. Schemes of this kind would be entirely compatible with a confirmedly productivist welfare state.24 Since neither pure basic income nor pure

---


systems of egalitarian wage subsidizing actually exist, and both are far removed from actual practice in any of the three worlds of welfare, we can leave this matter aside here.

What the basic income controversy does suggest, however, is that concerns for autonomy and fairness need to be evaluated against a background of diverse endowments and preferences, or if one prefers a less economistic way of putting it, a diversity of individual means, needs and aspirations. In the extreme, diehard productivists wish to enforce participation in full-time work, allowing exemptions only for a rigidly defined set of alternative options, such as education and care for small children during a limited period of time. This preoccupation does not exclusively rest upon notions of fairness to ‘doing one’s bit’ by contributing according to productive ability. It is also a social judgement concerning the appropriate way of living one’s life. Against this, post-productivists tend to regard full-time work as a ‘default option’ which can only be maintained in society by ‘exerting labour market pressure’. As Goodin emphasizes, this stance is directly motivated by the value of personal autonomy. But indirectly, as we have seen above, it reflects a social judgement which underwrites the choices of those who would be most eager to capitalize on the options for deviating from full-time paid work, if they were given that choice. So while one part of the normative disagreement captured by the concept of restricted post-productivism turns on rather abstract values of autonomy, fairness and distributive justice, another (by no means unrelated) part of it is focused upon more concrete values that bear on the social legitimacy of personal choices to moderate one’s involvement in building a lifelong career of full-time paid work. In this last respect, the wider social concerns of productivism and post-productivism will often be opposed, but might sometimes converge.

For example, it is common sense that families with children in the ‘rush hour of life’ stand to benefit from a more relaxed view on the virtues of employment. As is increasingly recognized, this may be socially beneficial. A better balance between income-generating and care-giving work is conducive to forming the powers of autonomy of adults in the next generation. Indeed, this was one reason why we did not follow Goodin’s proposal to include the freedom from unpaid work as a desideratum of post-productivism (see Section 3). A post-productivist welfare state may wish to underwrite a child-centred strategy of social investment out of concern for autonomy, as Anne Alstott has argued. But equally, productivists of the social democratic stripe favour such a strategy as an essential way of promoting human capital, attitudes of economic self-reliance and, thus, as a means of preventing rather than remedying income deficiencies and insufficient taxable capacity of workers within the next generation.25

Incidentally, a less uptight view on paid work might also be considered more efficient for inserting the involuntarily unemployed with tenuous links to the labour market than insisting on mandatory participation in active labour market programmes. For the low-earning segments of the labour market, a larger scope of exemptions from paid work as legitimate grounds of eligibility for social benefits, possibly in the form of vouchers, person-centred grants or even a ‘participation income’ has been proposed as a middle way between productivist policy pressure and the post-productivist focus on granting low wage

individuals the right of initiative to entering the labour market on their own terms, or staying away from it.\footnote{26}

This particular debate is largely a European one, conducted on the left of the political spectrum. Its substantive positions translate into a relatively small difference on our scale of restricted post-productivism. That difference arises by virtue of different positions on the policy pressure aspect of the index of unconditionality, with considerable consensus between (left) productivists and post-productivists concerning the desirability of maintaining a decent ratio of income for non-working households. In the United States, by contrast, closing off access to benefits, a low minimum wage and (only occasionally) harsh policies of workfare do combine to keep most low-wage earners in employment by the threat of dire poverty. Here, the relatively low value of the index of unconditionality (one standard deviation below the mean for the United States) is due to economic pressure on the unemployed. This type of productivism, it must be noted, does not fit comfortably into our stylized account of the ‘statistically representative’ country in which one moves along the index of restricted post-productivism after controlling for poverty. For its result is that workers at the low end of the labour market, and especially in non-clearing segments of it, face their employers in a particularly bad bargaining position. Hence, many of them qualify as working poor with extremely arduous working hours and bad conditions of work. Thus, in this case, the debate between productivists and post-productivists is captured both by moving along the dimensions of the comprehensive and the restricted concept that we have distinguished. The issue here is not merely one of adjudicating between libertine or Victorian attitudes towards paid work. It also turns on deep disagreements on the very legitimacy of welfare, and on the power of labour markets to provide compensatory justice.\footnote{27}

To conclude this overview of normative disagreements, yet another reason for welcoming a shift in the post-productivist direction might be the wish to promote active democratic citizenship. One need not necessarily conceive of this in terms of the duty to engage in time-consuming political participation in parties, local associations or forums of deliberative democracy. Even if one counts as one’s main democratic responsibility the willingness to make an honest attempt to become informed of the diversity of conflicting interests before going to the polls to vote, including the interests of non-represented individuals or future generations, it may be necessary to dissociate oneself to some extent from the single-minded pursuit of a full-time occupation, and make an imaginative effort to connect with wider issues in the polity.\footnote{28} To this, a productivist might object that the domain of paid work, far from being myopically confined to what goes on in the office or factory, is actually a major site of democratic competences. We shall make no attempt

\footnote{26} For a statement on how a participation income would work, see A. B. Atkinson, ‘The Case for a Participation Income’, Political Quarterly, 67 (1996), 67–70. \footnote{27} On the massive gap in attitudes towards the legitimacy of welfare between the United States and Europe, see A. Alesina, E. Glaeser and B. Sacerdote, ‘Why Doesn’t the United States Have a European-Style Welfare State?’ Brookings Papers on Economic Activity, 2 (2002), 187–254. In addition to the difference in popular beliefs on the deservedness of the poor, which they show to be influenced by racial fragmentation in the United States, these authors focus on political explanations, notably the electoral system and the role of the courts in preventing attempts at redistribution. On the power of labour markets to provide compensatory payment for long hours and adverse working conditions if the background conditions, especially the availability of a decent fall-back in the form of a basic income, are met, see Groot, Basic Income, Unemployment and Compensatory Justice, chap. 2. \footnote{28} See R. E. Goodin, Reflective Democracy (Oxford: Oxford University Press, 2003), chaps. 9 and 12. Goodin’s model of reflective democracy ties in with his views on post-productivism in ways that might be explored further.
to comment on the issue here, except to suggest that serving democracy may involve not spending *too much time* in that domain.

In this section we have tried to show that our restricted concept is particularly useful for comparing welfare states in terms of the multifaceted problematic of post-productivism. As our illustration of the case of the working poor indicated, however, it remains important not to lose sight of what the ideal of a fully post-productivist society implies. Nonetheless, to have a partial operationalization that sets this ideal squarely in opposition to the ruling values of productivism, while separating out elements of consensus concerning the undesirability of poverty and involuntary underemployment, so far as these elements are shared genuinely across welfare states, is a definite advantage. That the values of productivism have been the ruling ones all along, and that they are becoming even more so recently, is not only reflected by familiar policy statements heard in almost all OECD countries to strengthen the ties to the labour market and afford less permissive access to welfare and social insurance checks. It is also shown by the emerging policy consensus – which notably includes the Netherlands – on the desirability of counteracting the steady decrease of average annual hours per employee in the Western world.29 We share Goodin’s view that it is valuable to have a coherent idea available in comparative analysis of what the alternatives to the dominant views on work and welfare might be, and we also agree that expressing this alternative in terms of measurable policy outputs, rather than institutional programmes, serves the sceptical purpose of finding out whether productivist policy statements actually get translated into productivist results.

6. FURTHER RESEARCH

Our present attempt to construct operational measures of post-productivism has produced results which are basically in line with Goodin’s explorations of the theme, but perhaps more easily interpretable. We also hope to have further clarified why it is of interest to try and bring the post-productivist problematic into the comparative analysis of welfare states. What is needed for developing this research programme most urgently, of course, are data for as many OECD countries as possible within a longish period, ideally from the decade of retrenchment after the oil crises in the 1970s, up to the recent past. It would be interesting to know whether the Netherlands has been the leader of post-productivism before and after 1993. Preliminary results (for 1985 and 2000) suggest that this is indeed the case on both of our measures. But they also show the desirability of reassessing some of the key variables of post-productivism, in particular the index of unconditionality. Given the causal significance of this variable, it may be wise to explore alternative ways of measuring the notions of policy-driven and economic labour-market pressure. As far as the rate of voluntary underemployment is concerned, it may also be important to search for better measurements of the distinction between voluntary and involuntary forms of (full-time and part-time) paid work and non-employment than can be gained from the OECD statistics we have used.

29 So far, then, policy developments in the Western world run contrary to Keynes’s post-productivist vision (J. M. Keynes, ‘Economic Possibilities for our Grandchildren’, in Essays in Persuasion (London: Macmillan, 1933/New York: Norton, 1963), pp. 358–73), to the effect that the economic problem of the satisfaction of basic needs would be solved within a century: ‘Thus for the first time since his creation man will be faced with his real, his permanent problem – how to use his freedom from pressing economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably as well’.
There are several obvious questions that would have to be sorted out after gathering more data. One of them was mentioned at the start of Section 5: to compare (restrictedly) post-productivist and productivist welfare states with respect to the poverty rate and the rate of involuntary underemployment. It is of comparative interest as well to obtain insight in the relations between institutional measures of the three worlds of welfare and measures of post-productivism. This again poses problems of data collection.

Finally, we want to mention a result which also merits further investigation. As noted in Section 2, Goodin’s starting point was a crude device of ‘work and welfare’. Taking the rate of social spending as the indicator of ‘welfare’, and implicitly assuming that it might tell us something useful about income adequacy and labour market unconditionality in the society, Goodin proceeded to capture the post-productivist concern with time adequacy, by taking the reverse of labour-force participation as the indicator of the extent to which ‘work’ is de-emphasized. The merit of this initial typology is that it provides a rough representation of the three worlds of welfare in the space of policy outputs, while suggesting that the Continental countries are the most hospitable of the three to post-productivism. However, acknowledging that time adequacy is better expressed by adding the proportion of part-time employment to the variable of ‘work’, it then appeared that the Netherlands is a decidedly atypical case within the Continental world.

On our measures of post-productivism, the special status of the Netherlands in 1993 has been amply confirmed. It is therefore natural to ask whether the scores of the thirteen OECD countries on those measures can safely be predicted by the ‘work and welfare’ approach. This is explored by taking the indices of comprehensive and restricted post-productivism \((CPP\) and \(RPP\)) as dependent variables in linear regressions on the reverse of the rate of labour-force participation \((1 - LPR)\), the rate of part-time employment \((PT)\) and the rate of social spending in gross domestic product \((SY)\). Table 3 summarizes the results.

The last column of Table 3 shows that 73 and 83 per cent of the variation in \(CPP\) and \(RPP\) is explained by the three variables of ‘work and welfare’, respectively. But this is explanation only in a limited statistical sense. It certainly does not amount to a good causal explanation.\(^{30}\) Instead the regressions suggest something about internal coherence of the present approach. To get an idea of how things stand in the three worlds of welfare in respect of the post-productivist problematic, the typology of ‘work and welfare’ seems a

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Linear Regression of CPP and RPP on the Variables of ‘Work and Welfare’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1 - LPR</td>
</tr>
<tr>
<td>CPP</td>
<td>0.50 (2.36)*</td>
</tr>
<tr>
<td>RPP</td>
<td>0.82 (4.91)**</td>
</tr>
</tbody>
</table>

Note: The cells of the table show standardized regression coefficients. Figures between brackets refer to \(t\)-values and to the \(F\)-value in the \(R^2\) column. *\(p < 0.05\); **\(p < 0.01\).

\(^{30}\) This is so for at least two reasons. First, the ‘work’ variables \((1 - LPR \text{ and } PT)\) are by definition positively associated with \(VU\) and \(VUC\), which are among the key variables of \(CPP\) and \(RPP\). Secondly, the causal structure is far more complicated than suggested by this regression model, for example because the rate of labour-force participation may be positively influenced by the indices of post-productivism, via the index of unconditionality, which is contained in both of them (endogeneity), and also because the labour force may grow as a result of more part-time employment (causal connections between independent variables).
good place to start, provided it is supplemented by data on part-time work. It is of course
ture that the concept of post-productivism is more complex, and moreover can be
elaborated with different purposes of comparative analysis in mind. But, apparently, once
you know the scores on ‘work and welfare’ in a set of countries, you are in a position to
say quite a lot about the situation in terms of these more sophisticated measures. It will
be of interest to see whether this rather surprising finding holds more generally.

APPENDIX

The material presented in this appendix should suffice for replicating the research we have reported. Some
of the variables mentioned in Goodin’s account of post-productivism (Section 2), as well as the key variables
we ourselves have used for defining comprehensive and restricted post-productivism (listed in Tables 1
and 2) are composite. All of those variables are based upon nine underlying statistics (ER, LPR, PT, UD,
IPT, NH, POVR, YNW and ALMP), which together form our dataset for the thirteen OECD countries. The
values of these nine statistics are given in the first nine rows of Table A2. Their definitions and sources
are given below the table. The remaining five rows of Table A2 first contain Goodin’s variable of average
weekly hours of paid and unpaid work performed by a male-female couple (NHT), which we have decided
to drop from our analysis, and then list the composite variables which figure in Goodin’s three-stage
exposition, as discussed in Section 2. The formulae defining the composite variables are provided. This
enables the calculation of their respective values in terms of the underlying statistics.

The Key Variables Listed in Tables 2 and 3

NHT: total weekly hours, paid and unpaid (male mean + female mean), based on respondents aged 20–59
years. The data refer to: Australia 1992; Belgium 1965; Canada 1992; Denmark 1987; Finland 1987; France
1974; Germany 1965; Italy 1980; Netherlands 1985; Norway 1981; Sweden 1991; United Kingdom 1985;
United States 1985 (Goodin, ‘Work and Welfare’, p. 30, fn. 45). The method of computing NHT is described
291–311.

The last four rows of Table A2 refer to the variables which were mentioned in Section 2. They have
been computed as follows:

Voluntarily non-employed as a proportion of the non-employed: VNE = 1 - [(UD x LPR)/(1 - ER)].
Part-time workers as a proportion of the working-age population: PTP = PT x ER
Voluntary part-time workers as a proportion of part-time workers: VPT = 1 - (IPT x LPR)/(PT x ER).
Average hours of paid work per year in the working-age population: NHP = NH x ER

Definitions of Variables in Table 2

The rate of voluntary underemployment: VU = 1 - [ER x (1 - PT) + (UD + IPT) x LPR]
The reverse of average hours per employee per year: RNH = 2,000 - NH
The index of (welfare–work) unconditionality: IU = z-score [(z-score YNW + z-score (1 - ALMP))/2].
The reverse of the poverty rate: RPOVR = 1 - POVR.
The dimension of freedom from paid work: FPW = factor regression score of Component 1 (see principal
component analysis of Section 3).
The dimension of disposable time: DT = factor regression score of Component 2 (principal component
analysis of Section 3).

Definitions of Variables in Table 3

The rate of voluntary underemployment corrected for involuntary underemployment:
VUC = 1 - [(ER x (1 - PT))/(1 - (UD + IPT) x LPR)].
The index of restricted post-productivism: RPP = factor regression score of one component (principal
component analysis of Section 4).
The summary index of comprehensive post-productivism: CPP = z-score [(z-score FPW + z-score DT)/2].
### Table A1: Rates of Labour-force Participation and Social Spending in Thirteen OECD Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>NL</th>
<th>D</th>
<th>F</th>
<th>S</th>
<th>N</th>
<th>DK</th>
<th>UK</th>
<th>USA</th>
<th>CAN</th>
<th>AUS</th>
<th>FIN</th>
<th>ITA</th>
<th>B</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPR</td>
<td>0.694</td>
<td>0.702</td>
<td>0.667</td>
<td>0.775</td>
<td>0.826</td>
<td>0.741</td>
<td>0.769</td>
<td>0.718</td>
<td>0.737</td>
<td>0.589</td>
<td>0.638</td>
<td>0.720</td>
<td>0.7062</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SY</td>
<td>0.266</td>
<td>0.174</td>
<td>0.185</td>
<td>0.233</td>
<td>0.169</td>
<td>0.198</td>
<td>0.160</td>
<td>0.130</td>
<td>0.146</td>
<td>0.088</td>
<td>0.240</td>
<td>0.195</td>
<td>0.171</td>
<td>0.181</td>
<td>0.047</td>
</tr>
</tbody>
</table>

*Note:* The 1993 data for SY are taken from OECD, *Historical Statistics 1970–1999* (Paris, OECD, 2000), Table 6.3. They are more recent than the series mentioned in Goodin, ‘Work and Welfare’, fn. 29. Sources for LPR are given in the footnote to Table A2, following.
## Table A2 Underlying Statistics

<table>
<thead>
<tr>
<th>Country</th>
<th>NL</th>
<th>D</th>
<th>F</th>
<th>S</th>
<th>N</th>
<th>DK</th>
<th>UK</th>
<th>USA</th>
<th>CAN</th>
<th>AUS</th>
<th>FIN</th>
<th>ITA</th>
<th>B</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER</td>
<td>0.637</td>
<td>0.640</td>
<td>0.590</td>
<td>0.711</td>
<td>0.719</td>
<td>0.738</td>
<td>0.665</td>
<td>0.717</td>
<td>0.638</td>
<td>0.658</td>
<td>0.608</td>
<td>0.526</td>
<td>0.561</td>
<td>0.647</td>
<td>0.065</td>
</tr>
<tr>
<td>LPR</td>
<td>0.694</td>
<td>0.702</td>
<td>0.667</td>
<td>0.775</td>
<td>0.765</td>
<td>0.826</td>
<td>0.741</td>
<td>0.769</td>
<td>0.718</td>
<td>0.737</td>
<td>0.739</td>
<td>0.589</td>
<td>0.638</td>
<td>0.720</td>
<td>0.062</td>
</tr>
<tr>
<td>PT</td>
<td>0.334</td>
<td>0.151</td>
<td>0.137</td>
<td>0.249</td>
<td>0.271</td>
<td>0.233</td>
<td>0.175</td>
<td>0.172</td>
<td>0.239</td>
<td>0.086</td>
<td>0.054</td>
<td>0.128</td>
<td>0.189</td>
<td>0.079</td>
<td></td>
</tr>
<tr>
<td>UD</td>
<td>0.078</td>
<td>0.090</td>
<td>0.116</td>
<td>0.073</td>
<td>0.072</td>
<td>0.124</td>
<td>0.109</td>
<td>0.078</td>
<td>0.122</td>
<td>0.124</td>
<td>0.207</td>
<td>0.128</td>
<td>0.096</td>
<td>0.109</td>
<td>0.036</td>
</tr>
<tr>
<td>IPT</td>
<td>0.056</td>
<td>0.015</td>
<td>0.048</td>
<td>0.062</td>
<td>0.036</td>
<td>0.048</td>
<td>0.032</td>
<td>0.050</td>
<td>0.055</td>
<td>0.069</td>
<td>0.029</td>
<td>0.023</td>
<td>0.038</td>
<td>0.043</td>
<td>0.016</td>
</tr>
<tr>
<td>NH</td>
<td>1,404</td>
<td>1,592</td>
<td>1,634</td>
<td>1,507</td>
<td>1,415</td>
<td>1,568</td>
<td>1,717</td>
<td>1,778</td>
<td>1,719</td>
<td>1,882</td>
<td>1,744</td>
<td>1,682</td>
<td>1,603</td>
<td>1,634</td>
<td>140</td>
</tr>
<tr>
<td>POVR</td>
<td>0.061</td>
<td>0.091</td>
<td>0.068</td>
<td>0.067</td>
<td>0.056</td>
<td>0.050</td>
<td>0.117</td>
<td>0.171</td>
<td>0.089</td>
<td>0.095</td>
<td>0.049</td>
<td>0.142</td>
<td>0.064</td>
<td>0.086</td>
<td>0.037</td>
</tr>
<tr>
<td>YNW</td>
<td>0.620</td>
<td>0.559</td>
<td>0.748</td>
<td>0.649</td>
<td>0.495</td>
<td>0.670</td>
<td>0.566</td>
<td>0.396</td>
<td>0.470</td>
<td>0.454</td>
<td>0.584</td>
<td>0.510</td>
<td>0.639</td>
<td>0.566</td>
<td>0.099</td>
</tr>
<tr>
<td>ALMP</td>
<td>0.028</td>
<td>0.042</td>
<td>0.105</td>
<td>0.119</td>
<td>0.030</td>
<td>0.184</td>
<td>0.018</td>
<td>0.027</td>
<td>0.036</td>
<td>0.080</td>
<td>0.100</td>
<td>0.038</td>
<td>0.122</td>
<td>0.071</td>
<td>0.051</td>
</tr>
<tr>
<td>NHT</td>
<td>43.8</td>
<td>52.1</td>
<td>51.8</td>
<td>48.1</td>
<td>50.8</td>
<td>48.5</td>
<td>46.1</td>
<td>54.0</td>
<td>51.3</td>
<td>50.0</td>
<td>48.8</td>
<td>54.3</td>
<td>57.0</td>
<td>50.6</td>
<td>3.55</td>
</tr>
<tr>
<td>VNE</td>
<td>0.851</td>
<td>0.825</td>
<td>0.811</td>
<td>0.804</td>
<td>0.804</td>
<td>0.609</td>
<td>0.759</td>
<td>0.788</td>
<td>0.758</td>
<td>0.733</td>
<td>0.610</td>
<td>0.841</td>
<td>0.860</td>
<td>0.773</td>
<td>0.082</td>
</tr>
<tr>
<td>PTP</td>
<td>0.213</td>
<td>0.097</td>
<td>0.081</td>
<td>0.177</td>
<td>0.195</td>
<td>0.172</td>
<td>0.155</td>
<td>0.125</td>
<td>0.110</td>
<td>0.157</td>
<td>0.052</td>
<td>0.028</td>
<td>0.072</td>
<td>0.126</td>
<td>0.058</td>
</tr>
<tr>
<td>VPT</td>
<td>0.817</td>
<td>0.891</td>
<td>0.604</td>
<td>0.729</td>
<td>0.859</td>
<td>0.769</td>
<td>0.847</td>
<td>0.694</td>
<td>0.640</td>
<td>0.677</td>
<td>0.590</td>
<td>0.523</td>
<td>0.662</td>
<td>0.716</td>
<td>0.115</td>
</tr>
<tr>
<td>NHP</td>
<td>894</td>
<td>1,019</td>
<td>964</td>
<td>1,071</td>
<td>1,017</td>
<td>1,157</td>
<td>1,142</td>
<td>1,275</td>
<td>1,097</td>
<td>1,238</td>
<td>1,060</td>
<td>885</td>
<td>899</td>
<td>1,055</td>
<td>126</td>
</tr>
</tbody>
</table>

**Note:** Values of variables between 0 and 1 are given as ratios rather than percentages.