

## Medieval Crafts, Guilds and Industrial Development: A Central-Western European Comparison

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For a brief moment at the end of the thirteenth century the Central European population's interest suddenly focussed on a remote mountain region of Bohemia as news percolated throughout the region of a fabulous silver find. Nor were the expectant rumours unfounded for a small band of miners working on the lands of the Abbey of Sedlitz had struck a lode, which was to sustain an output a production unrivalled in contemporary Europe. The whole area, upon the slopes of the Bohemian silver mountain was soon littered with prospectors as the *sbeh ke Kutné* – the rush to Kutná began. At this time Kutná Hora or Kuttentberg was said to have “attracted crowds of foreign people drawn by avarice to this abyss of sin”. The story of the mine's wealth spread throughout Europe and the further it spread the more it became exaggerated. At the end of the fourteenth century it was reported in Styria that some 10,000 had been attracted to the Kutná workings from Poland, Pomerania, Meissen and Upper Hungary. On the Rhine it was related that there were 60,000 miners working day and night at the Bohemian mine. The stories, according to contemporary chroniclers, evoked amongst many the desire to control this “gem of the kingdom” but such were the conflicting interests involved that whilst the small mountain village grew in importance it never became an urban community. Many of the producers, because they formed part of the patrician elements of other places, opposed such a move. Nor did the neighbouring towns of Kolin and Časlave, which enjoyed a functional relationship with Kutná Hora, show any interest in its securing urban status. The small mountain village accordingly remained subject to the jurisdiction of Jihlava, which had dominated mining activity in the 1270s but was now in high decline, but still remained the supreme arbiter of mining activity within the kingdom. Activity at the Kutná Hora workings, however, was intense and all the main ore deposits there were known and worked in the early fourteenth century. These workings fell into two groups-copper pyrites and silver bearing galena- the most significant silver zone being the Oselský vein. Initially on the basis of these deposits from 1298-1306 the new mine produced the prodigious quantity of some 6.5 tonnes of silver per year. Output, however, soon declined to about 1.5 tonnes in 1311-1318, thereby reducing the average annual output of the overall period 1298-1350 to two tonnes.<sup>1</sup> Supplemented, however, from 1311 with silver from the newly opened Bohemian mine at Příbram the pace of silver production decline was slow during the fourteenth century and was in part counterbalanced by an increase in gold output.

During the upswing of the prevailing long-cycle (ca. 1253-1306) culminating in the rush to Kutná (ca 1298-1306) gold mining had remained a small scale and intermittent affair. Diminutive workings were established in the Opawa district<sup>2</sup> and at Goldberg and Nikolstadt in Silesia.<sup>3</sup> At this time Silesia dominated European gold production but output was tiny.<sup>4</sup> When,

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<sup>1</sup> J. Koran, *Prehledne dejiny ceskoslovenskeho hornictvi* (Prague, two volumes, 1955), I, pp. 89-90, 195. The figures of Koran, based on actual mine revenues, must be preferred to the hearsay and chronicle evidence presented by P. Spufford, *Money and its use in medieval Europe* (Cambridge, 1988), p. 125 or the estimations of J. Janáček, “L'argent tcheque et la Méditerranée, XIV<sup>e</sup>-XV<sup>e</sup> siècles” in *Mélanges en l'honneur de Fernand Braudel* (Paris, two volumes, 1973), I, p.259 n.12 which yield an exaggerated output of 20-25 tonnes

<sup>2</sup> F. Pošepný, “Die Goldvorkommen Böhmens und der Nachbarländer”, *Achiv für praktische Geologie*, II (1895)

<sup>3</sup> E. Fink, “Die Bergwerksunternehmungen der Fugger in Schlesien”, *Zeitschrift des Vereins für Geschichte und Alterthum Schlesiens*, XXVIII (1894), p. 308

<sup>4</sup> H. Kellenbenz, “The gold mining activities of the Fugger and the cementation privilege of Kremnitz” in I. Blanchard, A. Goodman and J. Newman (eds.), *Industry and Finance in Early Modern Europe. Essays presented to George Hammersley on the occasion of his 74<sup>th</sup> birthday* (Stuttgart: VSWG-Beiheft, 98, 1992), p.186

however, Central European silver production commenced from 1306-1392/1412 on a protracted path of terminal decline, the onus of maintaining the high levels of precious metal production passed to new gold producers at Kremnica (Kremnitz) in Upper Hungary<sup>5</sup> and at the placer workings of Transylvania. According to reliable estimates the yearly gold production of Hungary during the years 1325-1375 was about 4,000 kg before falling to 2,900 kg in 1375-1400 and to 1,500 kg during the reign of Sigismund (1387-1437).<sup>6</sup>

As the European “mining frontier”, had shifted eastward in the aftermath of the “Great Bullion Famine” of 1208/14-1255, major new industrial complexes had been created in Bohemia, Poland and Hungary. Nor when subsequently, during the years 1395/1415-1455, the focus of silver production again shifted - to Serbia and Bosnia- was the previously important position of Bohemia, Poland and Hungary in the European mining and metallurgical industries undermined. In Bohemia-Moravia copper from the pyrites (chalkopyrites) deposits of present-day eastern Slovakia came to dominate the markets of Northwest Europe. From ca. 1415-1450, production at Spiš, whose wares had displaced those of Goslar on the markets of Northwest Europe in the fourteenth century, was augmented by the output of new centres.<sup>7</sup> During the 1420s and 1430s it was the products of Gelnica, Lubietova and Smólnik mines, engrossed in the hands of Jan Falbrecht, the ‘Copper Baron,’ which dominated the market. Production increased. At Smólnik, which with Gelnice and Tichá Voda were the main smelting centres of the new industry, output steadily increased. It rose from 1,231 zentners in 1410 to 4,613 zentners in 1439 before decline commenced, ultimately leading to the abandonment of the flooded workings in the 1460s.<sup>8</sup> Even as the products of the Serbian-Bosnian silver-lead mines after 1415 came to dominate European mint output and non-argentiferous coppers of the Balkans, Tirol and East Slovakia established their market hegemony, moreover, argentiferous coppers of the Erzgebirge were exploited by a new technology- the *Saigerprozess*.<sup>9</sup> The refining of argentiferous copper first established by this method during the years 1395-1415 continued, even if at a diminutive level, at Venice and Nürnberg. The *Saigerhütte* at the latter centre drew raw copper supplies during the 1430s from Kuttenberg (Bohemia), Zwickau and Meissen (Saxony) and lead from the Erzgebirge market town of Eger.<sup>10</sup>

Even more spectacular was the situation in Hungary, where even as the placer-gold workings underwent a spectacular decline other Upper Hungarian production centres – at Kremnitz (Kremnice or Kőrmöcbánya) and Schemnitz (Banská Štiavnica or Selmecebánya)- came to the fore. Rising gold prices after 1418 encouraged an intensification of activity within the cameral district. Even during a temporary depression in gold prices from 1432-1435 the roasting and separation works there delivered for minting some 1,600 kg of gold and 2,688 kg of silver a year and the cementation works at Kremnitz added a further 195 kg of silver.<sup>11</sup> High gold prices coupled with the introduction of a new technology created a new and permanent element in the European gold industry, which in conditions of price stabilisation between 1434-1454 made a

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<sup>5</sup> Š. Kazimir, *Kremnická mincovna 1328-1978* (Kremnica, 1978)

<sup>6</sup> M. Malowist, “Problems of the Growth of the National Economy of Central-Eastern Europe in the Late Middle Ages”, *Journal of European Economic History*, III (1974), p. 345

<sup>7</sup> A. Fleck, *Beiträge zur Geschichte Kupfers* (Jena, 1908), p.34

<sup>8</sup> J. Vlachovič, *Slovenská Med v 16 a 17 storoci*, (Bratislava, 1964), p.25

<sup>9</sup> I. Blanchard, *Mining, Metallurgy and Minting in the Middle Ages Vol. 3 Continuing Afro-European Supremacy, 1250-1450. African Gold and the Second and Third European Silver Production Long-cycles*. (Stuttgart, 2005), pp. 970-976.

<sup>10</sup> H. Schenk, “Nürnberg und Prag”, *Giessener Abhandlung zur Agrar- und Wirtschaftsforschung des europäischen Ostens*, XLVI (1969)

<sup>11</sup> O. Paulinyi, “The Crown Monopoly of Refining Metallurgy of Precious Metals and the Technology of the Cameral Refineries in Hungary and Transylvania in the Period of Advanced and Late Feudalism (1325-1700) with Data and Output” in H. Kellenbenz (ed.), *Precious Metals in the Age of Expansion. Papers of the XIVth International Congress of the Historical Sciences. Introduced and edited on behalf of the International Economic History Association* (Nürnberg: Beiträge zur Wirtschaftsgeschichte, Bd. 2., 1981), p.38; Š. Kazimir, *Kremnická mincovna 1328-1978* (Kremnica, 1978)

small but not insignificant contribution to European supplies of that metal. Far more important, however, were the results of the application of the same technology to ores from the deposits at Neustadt (Nagybánya) located near the river Zazar where it flowed from the Avar-Gutin Mountains. The workings here (*Große Grube*), accessed by four shafts (*Rueder- Schulers- Khrumb- and Stanntruederschact*) and extending some 1,213-1,354 meters in length in 1453 subsequently, after their decay, enjoyed an almost legendary reputation for their riches.<sup>12</sup> Nor was this reputation unjustified. The works at its height in 1453/4 when the Stadtherr Johannes de Hunyad described it produced some 14,300 marks (3,508 kg.) of gold a year,<sup>13</sup> establishing “Hungarian” (i.e. Slovak, Hungarian and Transylvanian) supremacy in the contemporary European industry.

## I

The High Middle Ages (ca 1250-1450) had thus seen the establishment of a new industrial activity- non-ferrous mining and metallurgy- in Bohemia, Poland and, particularly after 1306, Hungary. Mining camps, which were said to be an “abyss of sin”, had sprung up throughout these lands and, like their counterparts in later ages, these became characterised by a profligate and hedonistic life-style. Their direct impact was slight, however, on the surrounding countryside.<sup>14</sup> Raw materials for the works, like charcoal, because of its friable nature, was provided through local, dispersed supply networks, the provisioning of the miners was undertaken by tavern-owners and brothel-keepers whose activities made them rich but unlikely candidates for guild or craft status. As in other mining ‘bonanzas’ it was those that disposed of the precious metals, obtained as producers or through the market, who were the major beneficiaries. As early as the last third of the thirteenth century they had come to dominate the export sector of the region’s economy. A manuscript compiled at that time provides an intimate picture of their trade, detailing the most important goods transported to Bruges via the East-West roads through Germany and by the South-North routes through Poland. The references to Hungary, Bohemia and Poland contain specific information about the wares traded at this time.

“Dou royaume de Hongrie vient cire, or et argent en plate. Dou royaume de Behaingne vient cire, or, et argent et estain. Dou royaume de Polane vient or et argent en plate, cire, vairs et gris et coivre”.<sup>15</sup>

The trade was confined to either the products of the burgeoning mining industry of these lands – gold and silver in coin or ingots, copper and tin- or to forest products- wax and furs- which, though highly priced, could still be sold in an increasingly deforested Western Europe. Half a century later, thanks to government attempts in 1335 to regulate this trade, the intra-regional trade networks servicing this commerce are revealed (map. 1).<sup>16</sup> From Buda traders would either took the road through Estergom, Holić, and Brno to Bohemia or passed by way

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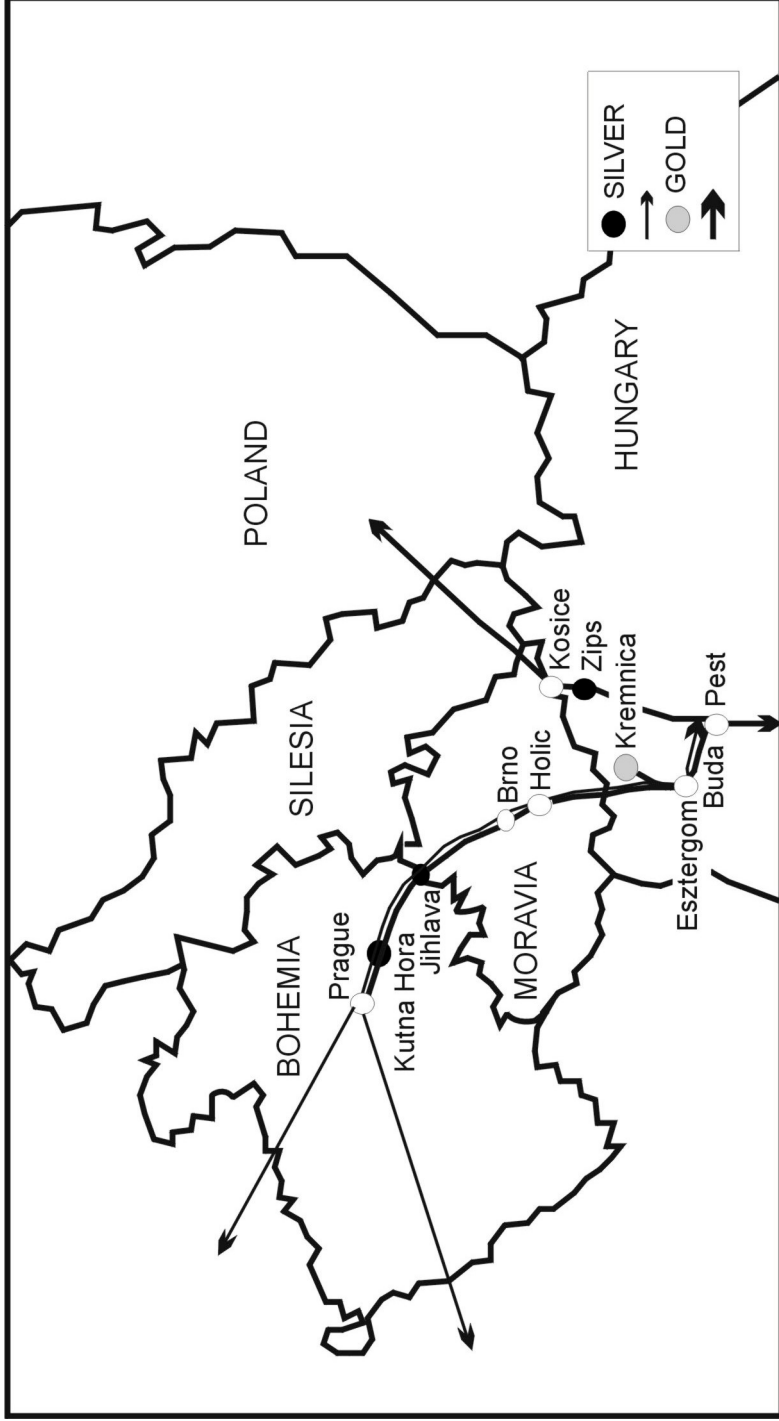
<sup>12</sup> O. Paulinyi, “Der erste Bau von Strauseen und des wassergetriebenen grossen Kehrades zur Bekämpfung der Wassernot von Zechen. Der Versuch einer Rekonstruktion des Bergbaues von Nagybánya-Ungarische Neustadt in den Jahren 1506-1513 durch Johann und Georg Thurzó von Bethlenfalva”, *Acta Historica Academiae Scientiarum*, XXIV (1978), pp. 113-114

<sup>13</sup> G. Wenzel, *Magyarország bányászatának kritikái története* (Budapest, 1880), pp. 401-402

<sup>14</sup> Ondrej R Halaga, “The Woodland and Field Demesnes of the Towns of Eastern Slovakia as Basis of their Mineral Trade” and Stefan Kazimir, “The Supply of Food and Other Consumer Goods to Central Slovakian Mining Towns from the Fourteenth to the Eighteenth Century. Some Thoughts on Permanent Features over an Extended Period of Time” in Ekkehard Westermann (Hrsg.), *Bergbaureviere als Verbraucherzentren* (Stuttgart: Franz Steiner Verlag, VSWG-Beiheft, 130. 1996)

<sup>15</sup> *Hansische Urkundenbuch* edited by K. Höhlbaum (vols. 1-3), K. Kunze (vols. 4-6) and published at Halle 1876-1896, III, p. 419 n. 1

<sup>16</sup> B. Homan, “La circolazione delle monete d’oro in Ungheria dal X al XIV secolo et la crisi europea dell’ oro nel secolo XIV”, *Revista Italiana di Numismatica*, Second Series, V (1922), pp. 123-125



MAP 1. "OFFICIAL" TRADE ROUTES FOR SPECIE BY TREATY OF 1335

Košice and Zips to Poland. Merchants, predominantly exporting specie from the region grew rich and disbursing their funds created a new 'urban' complex in East-Central Europe. The most significant and most populated urban centre was Prague. Charles IV turned this city into his royal residence and established some new districts there. He founded the university and made considerable efforts to promote the development of Prague. At the time of the death of the emperor, there were some 40,000 inhabitants. By comparison, in this period Cologne, the most populated German town amounted to 30,000, Lübeck, Danzig, Nürnberg and the other important ones to 20,000 - 23,000 inhabitants.<sup>17</sup> Beside Prague the most significant centres in East-Central Europe were Breslau (Wrocław) (over 20,000), Cracow (Kraków) and Lemberg (Lwów) (below 200,00). In Hungary there were no large cities like these. At the end of the fifteenth century Buda had 8,000 and Pest, Kaschau and Szeged a somewhat smaller population.<sup>18</sup> The level of urbanization is determined, however, not only by the metropolises and residential cities but by the density of smaller urban centres as well. In Bohemia beside Prague, the dominant capital, numerous towns produced a prosperous urban network. There were at least thirty-two royal towns each with 2,000-5,000 inhabitants. The main towns had their own commercial ties outside Bohemia e.g. Prague, Pilsen and in Moravia, Brno. The proportion of the urban population was the largest in Bohemia as compared to Poland and Hungary.<sup>19</sup> The fourteenth century, however, also saw the beginning of urbanisation in Poland. The most significant progress occurred in Silesia and in Little Poland. Behind the principal centres Cracow, Breslau, Poznan, Sandomierz a lot of smaller towns also took part in the international trade. In Hungary the bulk of the urban population lived in approx. 800 small town-like privileged settlements, called *oppida*. The average number of inhabitants in these *oppida* were only few hundred people, and most of them lived on agricultural production.

Urban development therefore was largely confined to the foreign trade sector of Central-East European economies. Here merchants grew rich by the export of specie. Their links to the rest of the economy, however, remained restricted to trade with the centres of specie production, which provided the basis for their export trade. Mining was not an isolated activity of independent miners so it necessitated the establishment of a more complex organisation. Numerous people had to work together with special skills and long experience. The water supply and the drainage, the transportation of ore and metal also had to be provided. Among the medieval industries, mining was under the closest control of the authorities, that of the feudal lord, who owned the mine and, in the case of precious metals, the royal officials who controlled and recorded activity at the works. Urbanisation in the mining regions was considerable, and a significant part of the population worked not in the self-supporting agriculture, but in this special and unique branch of industry, which produced its goods mainly for the international market.<sup>20</sup>

## II

In neither the commercial nor mining towns, however, did there evolve those manufactories-crafts and associated guilds providing a wide-range of consumer goods for the indigenous population of the region. The mining 'boom' had not only provided a new export commodity for the region but had also created an entirely new commercial environment within which its

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<sup>17</sup> H. Kellenbenz, "Die europäische Wirtschaft zur Zeit Kaiser Karls IV.," *Jahrbuch für fränkische Landesforschung*, (1979), p. 64

<sup>18</sup> E. Fugedi, "Pour une analyse démographique de la Hongrie médiévale", *Annales: économies sociétés civilisations* (1969), p. 1396; H. Samsonowicz, "War Jagellonisches Ostmitteleuropa eine Wirtschaftseinheit?", *Acta Poloniae Historica* (1980), pp. 89-90

<sup>19</sup> F. Graus, "Die Handelsbeziehungen Böhmens zu Deutschland und Österreich im 14. und zu Beginn des 15. Jahrhunderts," *Historica* (1960), pp. 97-98; E. Fugedi, "Europe" in A. Maczak, H. Samsonowicz and P. Burke (eds), *East-Central Europe in Transition 14 -17th centuries* (Cambridge, 1985), p. 50

<sup>20</sup> H. van der Wee, "Un modèle dynamique de croissance interséculaire du commerce mondial (XIIe - XVIIIe siècles)", *Annales: économies, sociétés, civilisations* (1970), p.106

merchants would operate. A long-term stability in gold prices came to characterise European specie markets during the mid-fourteenth century (1325-1375) which rested upon the existence of a delicately balanced bi-metallic equilibrium within and between a series of autonomous specie markets. Each maintained the level and composition of its precious metal stock from independent, indigenous supply sources of silver and gold. The first of these, North of the Alps possessed plentiful supplies of gold emanating from Hungarian mines, which, when exchanged against silver, largely produced during the years 1290-1345 in Bohemia and from 1345-1410 at Freiberg-in-Meissen, created a stable monetary stock characterised by a relative abundance of gold. Further South, two similar autonomous markets existed on the basis of an efficient inter-continental trade network, facilitating the exchange of African gold for silver from Europe and Central Asia. Driving directly northward from the gold fields of the Niger Bend across the deserts of central Asia, caravans carried gold each year to the refining and minting centres of Morocco, providing the basis for an abundant circulation of “heavy” single and double dinars in the western Mahgreb. Further East caravans travelling via Ghardames, conjoining with those taking the East African routes, brought forth similar supplies to Egypt for minting into those miscellaneous gold pieces which found currency in the lands of the Circassian Sultanate, the Muslim East, the Hidjaz and the Yeman. Two distinct zones had thus emerged, each with cheap and plentiful supplies of gold, which were juxta-positioned against equivalent areas of abundant silver, thereby encouraging an active interchange of the two metals. In the West the profitability of this exchange was such that for half a century trade in goods was subordinated to trade in specie. From 1325-1375, gold *doblas* regularly passed northward bringing forth a countervailing supply of European silver southward. In response to these flows a distinctive market structure evolved in the western- Tyrrhenian - basin of the Mediterranean characterised by a long-term stability in gold prices and an “anti-cyclonic” distribution of the two metals between the two continental littorals. Though relatively scarcer as one moved northward, gold was abundant to customers within a unitary market in which the African product reigned supreme. Nor was the situation significantly different in the eastern zone where gold, after minting, was distributed in a similar market structure in exchange for small quantities of European silver and large amounts from the mines of the Isaurian Taurus (Gümüş Saray, Lu’lu’a and Barbut). Within the area spanned by European commercial networks there were thus three distinct and autonomous specie markets. Each had its own sources of gold and silver and a similarly balanced stock of precious metals conforming to a common bi-metallic standard. Each thereby retained its autonomous character yet was united into a homogeneous and unitary system.<sup>21</sup>

The monetary preconditions for an efficient international exchange network were established. Long-distance merchants embedded in the export sectors of national economies across Europe, by utilising its facilities, were able during these years to reduce transactions costs, and expand their business, allowing functional regional specialisation in a spatially extended international economy. Only when those conditions were disturbed by successive monetary crises, which attained their nadir during the years 1392-1412 and 1455-1463,<sup>22</sup> did, those engaged in international trades experienced a marked reversal of their fortunes. With the emergence of bi-metallic premiums on the exchanges, transaction costs increased and a trade in specie displaced trade in goods. Nor were the merchants’ domestic counterparts unaffected by these changes. In Central Europe, where the populations were still largely dependent upon the use of coins to undertake their everyday transactions, dwindling supplies of such coin created an acute monetary crisis, deflationary pressures and reduced economic activity. In Western Europe the situation was somewhat different. In the short-term the crises caused similar acute shortages of coins, which again disrupted economic activity. By extending the number of transactions in which “alternative” money supplies were utilised, however, the populations were able to avoid the worst

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<sup>21</sup> I. Blanchard, “Le marché égyptien des espèces et la crise de l’or au quinzième siècle” Unpublished paper presented at the École des Hautes Études en Sciences Sociales, Paris, 1985.

<sup>22</sup> J. Day, “The Great Bullion Famine of the Fifteenth Century”, *Past and Present*, no. 79 (1978), pp. 3-53

effects of the crisis. Prices stabilised and populations continued to be able to make investment decisions free from the distractions caused by monetary disorder.<sup>23</sup>

### III

The nature of these decisions was however highly conditioned by changes wrought in prevailing factor markets by the onset in 1348 of a new plague pandemic – the Black Death. In the demographic history of the East-Central European countries the fourteenth and fifteenth centuries were not a period of a drastic population decline and thereafter a slow recovery, but rather a steady increase.<sup>24</sup> This progress lasted at least until the second half of the sixteenth century. Resource-manpower stabilisation thus occurred, which allowed the new economic regime to continue in operation in much the same form as it had first assumed during the years ca. 1250-1392/1412. At that time per capita income had increased and real savings levels were enhanced. Base interest rates, measured in terms of the price of land or rather in terms of a perpetual fixed rent charge secured on land, accordingly fell from the “Dark Age” levels of ca 15% per annum to the normative 8-10%.<sup>25</sup> As investment funding became progressively cheaper the merchants advanced money to the local seignorie and indirectly to the *rustici*. They invested in viticultural production and vast herds or *chereda* of cattle. The latter thus now provided not only a new import substitute - wine - but also during successive booms (in 1425-1450, 1475-1525/6 and 1541/6-1573/4) a new export product -cattle.<sup>26</sup> The old export trade in forest products - wax and furs - was thus now augmented by a new and rapidly expanding commerce in livestock. Continuing to operate in similar, if not identical, factor market conditions, however, the populations of East-Central Europe had little incentive to change the “medieval” socio-economic system, which continued unaltered throughout the years 1330-1540.

In Western Europe, on the other hand during the years 1348/9 – 1392 the balance between population and resources was totally transformed. The survivors of the epidemics found themselves in an environment of abundant resource availability and evolved a new demographic regime designed both to maintain this situation and provide themselves with the means to exploit the opportunities it provided. This strategy was forged amidst the turmoil of the monetary crisis of 1396-1412 when the populace was unable to acquire through market institutions the capital needed to stock the abundant acres made available to them by the process of demographic decline. They accordingly evolved a process of self-accumulation. Women intent on self-improvement and needful, in a male-orientated legal system, of attracting a resourceful man for the realisation of their ambitions, spent extended periods of time as servants in husbandry. By working into their late ‘twenties they were able to accumulate that large dowry which allowed them to marry an enterprising individual who, with the money brought to the marriage and/or borrowed from elderly members of village society, could acquire and stock a substantial holding. By delaying marriage, moreover, levels of fertility were reduced to such an extent that the

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<sup>23</sup> I. Blanchard, *Mining, Metallurgy and Minting in the Middle Ages*, III, chapter 5, pp. 1089-1107

<sup>24</sup> For the demographic history of East-Central Europe in the Middle Ages see: E. Fugedi, “Pour une analyse démographique de la Hongrie médiévale” *Annales, économies, sociétés, civilisations* (1969), pp. 1299-1312 ; E. Fugedi, “The Demographic Landscape of East-Central Europe” in A. Maczak, H. Samsonowicz and P. Burke, (eds.), *East-Central Europe in Transition 14-17th centuries* (Cambridge, 1985) 47-58; F. Graus, “Autour de la peste noire au XIVe siècle en Bohême”, *Annales, économies sociétés, civilisations* (1963), pp. 720-724; I. Gieysztorowa, “Research into the demographic history of Poland. A provisional summing-up”, *Acta Poloniae Historica* (1968), pp 5-17; J. C. Russell, “Recent advances in medieval demography” *Speculum* (1965), pp. 95-96

<sup>25</sup> Base interest rate statistics have been derived from M. Neumann, *Geschichte des Wuchers in Deutschland* (Halle, 1865), pp. 266-273

<sup>26</sup> I. Blanchard, “The Continental European Cattle Trades, 1400-1600”, *Economic History Review*, Second Series, XXXIX (3) 1986, pp.428-431. Reprinted in D. Irwin (ed.), *Trade in the Pre-Modern Era, 1400-1700* (Oxford, 1995)

population stabilised at the much-diminished post-plague levels and the situation of abundant resource availability was perpetuated.<sup>27</sup>

Operating within a newly created and hierarchically ordered system of social values, which afforded them a sense of individual identity and defined their place in an age of demographic-economic discontinuities, members of English peasant society experienced during the years 1330-1580 a process of socio-economic advancement. Average per capita land holding increased. Erstwhile labourers were able, in the high-wage conditions of the fifteenth century, to accumulate sufficient funds to acquire at low rents the half- and full virgates (ca. 16 and 32 acres respectively) of land which would be their passports for entry into village society. The more enterprising amongst the ranks of that society engrossed multiples of such landed units. Thereby they created large holdings of ca. 120-200 acres, and assumed their place in a new peasant elite whose position in rural society was delineated by parliamentary (sumptuary) legislation and defined by its own self-created sense of *gentillesse*. Each and every active member of rural society was able to realise their labour potential in relation to larger landed resources than before, maintaining land-based status differentials in a hierarchically ordered society within which average per capita landholding equilibrated upwards in size. Polarisation, in as far as it existed, rested NOT on a differentiation in the size of an individual's land holding - an increasingly wide division between land-rich and land-poor. Rather it depended on the capacity of the individual to work the land - a division between the young and able and old, childless and feeble. The two groups, moreover, existed in a mutually dependent relationship. The young possessed the labour to work the land but lacked the necessary capital for the realisation of their full potential. The old, very often in the fifteenth century widows who were unwilling to surrender their independence, possessed the accumulated wealth of their active years. Yet lacking children and too feeble to work themselves, they commanded insufficient manpower to effectively utilise this capital on their family holding. By leasing out their land (on a reversionary basis) and making loans from their accumulated wealth to the young and enterprising, however, the old were able to enjoy a large income, maintaining their high income/landholding-related status position in village society in the capacity of a rentier. By their actions, moreover, they provided the young with both venture capital and that necessary access to a "successor status" which ensured their family's long-term place within the closed circle of the village land market.<sup>28</sup>

In these conditions intra-village capital markets were transformed, as population numbers declined, prices fell, per capita landholding-income increased and real savings levels were enhanced. Base interest rates accordingly fell. During the course of the thirteenth century, western European base rates had fluctuated about a high-level equilibrium of about 8-10% per annum. Then from ca. 1300 they steadily declined until amidst the turmoil of the monetary crisis

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<sup>27</sup> R. M. Smith, "Relative prices, forms of agrarian labour and female marriage patterns in England, 1350-1800" in J. Devos and L. Kennedy (eds.) *Marriage and rural economy: Western Europe since 1400*. (Brussels, 2000), pp. 19-48 and "Hypothèse sur la nuptialité en Angleterre au XIII-XIVe siècles", *Annales: économies, sociétés, civilisations*, XXXVIII, 1 (1983); J. Goldberg, *Women, Work, and Life Cycle in a Medieval Economy* (Oxford, 1992), "Women" in R. Horrox (ed.), *Fifteenth-Century Attitudes* (Cambridge, 1994), pp.112-3, *Women in Medieval English Society* (Stroud, 1997) and "Mortality and Economic Change in the Diocese of York, 1390-1514", *Northern History*, XXIV (1987), pp. 38-55

<sup>28</sup> I. Blanchard, "Industrial Employment and the Rural Land Market, 1380-1520" in R. M. Smith (ed.), *Land, Kinship and Life Cycle* (Cambridge: Cambridge Studies in Population, Economy and Society in Past Time, 1, 1984), pp.227-276; "Social Structure and Social Organization in an English Village at the Close of the Middle Ages: Chewton 1526" in Edwin Brezette de Windt (ed.), *The salt of common life: individuality and choice in the medieval town, countryside and church. Essays presented to J A Raftis on the occasion of his 70th birthday* (Kalamazoo, 1996), pp. 307-340 and the same author's 'Consumption and Hierarchy in English Peasant Society, 1400-1600', *Chicago Economic History Workshop Papers*, No.20 (1980), pp.1-12 and 'Konsumpcja ne wsi angielskiej, 1580-1680 (English Peasant Consumption. The End of an Epoch, 1580-1680)', *Kwartalnik Historii Kultury Materialnej* XXX,1 (1982)

of 1396-1412 they finally settled at a new low level of between 4-5%.<sup>29</sup> As the fifteenth century opened, an enriched English populace was prepared to lend, on first class security, at previously unheard of rates. During that century, moreover, internationally this market underwent a process of extension. From ca. 1460 both South Germany and Upper Rhenish capital markets became integrated with those of England and the Lower Rhine and before the century was out even the volatile markets of Basle and its territories were brought within a unitary Central European structure. Nor were the denizens of this market alone in enjoying the benefits of this cheap money in the fifteenth century for at this time in the North German lands, extending from Bremen to Lübeck-Mecklenberg, interest rates also converged on those of Central Europe. Thus in northern Germany and many lands West of the Erzgebirge, during the fifteenth century money became progressively cheaper. A steadily widening population of potential borrowers and lenders were drawn into a unitary market structure wherein by 1500, loans could be arranged on the production of an ironclad security, at a standard 4-5% rate.

Within this unitary market money was cheap and there was no shortage of takers willing to take up funding for their activities at prevailing rates. As rates tumbled money was taken up not only to provide stock for those members of the peasantry who engaged in the new mixed husbandry practices then spreading through the English countryside but it was also employed to fund the same peasants' new manufactories, established to process the flood of raw materials - wool, hides, corn and minerals - which now poured forth from their holdings. Able to secure new enlarged landholdings and with an abundant and cheap supply of capital, members of the English peasantry were now able to provide themselves and their families not only with a veritable cornucopia of foodstuffs. They were also capable of fabricating for themselves and for sale, those raw materials, which had previously passed to the towns.

Town dwellers, able to eschew involvement in those low productivity industrial activities which had become the preserve of the peasantry, could thus now concentrate on the high value-added finishing trades, distribution and the provision of financial and associated legal services. In the process an unexpected ally, the English aristocracy, assisted them. By their investments in urban property markets the aristocracy allowed merchants and craftsmen to shift their asset holdings from low-yield real estate to investments in those new activities which provided them with a far higher return on their capital.<sup>30</sup>

Not least amongst those members of urban society who took advantage of this new situation were members of the international merchant trading community. As, particularly during the years 1392-1412 and 1455-1463, international trade had declined they had experienced an enhancement in the cost of commercial credit and had responded, in England at least, by creating a new financial system to tap alternative sources of funds. Here during these years alternative borrowers, such as English agriculturalists had possessed few ways of improving production and the returns on money invested in this sector were low. The interest they could offer on mortgages for agricultural improvement, accordingly, were also low (1½-3% per annum) and few if any amongst an enriched population had been tempted to put out money on such instruments when they could make a totally safe return of 4-5%. In such circumstances, merchants, able to offer returns above base rate, found few competitors bidding for money in the market place. Funds accordingly flowed from the agricultural to the non-agricultural sectors of the economy providing the basis for an elaborate sales credit system, which became the main source of English commercial credit. The international merchants' financial systems underwent a process of 'rustification', causing merchants and traders to make only marginal use of exchange facilities

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<sup>29</sup> Base interest rate statistics have been derived from M. Neumann, *Geschichte des Wuchers in Deutschland* (Halle, 1865), pp. 266-273 and Habakkuk. H. J., "The Long-term Rate of Interest and the Price of Land in the Seventeenth Century", *Ec.H.R.*, 2nd series, V, 1 (1952)

<sup>30</sup> I. Blanchard, "The Aristocracy and Urban Property Markets: The Case of Chesterfield, 1200-1500" unpublished paper to be presented at Session: "Medieval Economic History II: In Memory of Sylvia Thrupp" of the Forty-First International Congress on Medieval Studies to be held at Kalamazoo, May 4-7, 2006

and integrating them instead into an intricate nation-wide commercial-financial system which provided them with access to the riches of English peasant society.<sup>31</sup>

In the aftermath of the Black Death, in an environment of enhanced land: labour ratios, the English peasantry in particular had markedly raised their per capita product. Average per capita land holdings had increased in size and a mixed animal-arable system had evolved to allow them to fully exploit their extended resource base. Average land productivity under the new agrarian system was, however, lower than in a purely agricultural regime. By fabricating the raw materials produced on their holding, however, they were able to utilise the “dead time” available in their agrarian round and gain the value-added component of the finished product. Thereby they markedly enhanced their per capita product and provided the family not only with an abundance of foodstuffs, raiments and household utensils and equipment for their “self consumption” but also a sizeable cash income. Town dwellers were thus now able to eschew involvement in those low productivity industrial activities, which had become the preserve of the peasantry. Instead they could concentrate on the high value-added finishing trades, distribution and the provision of financial and associated legal services and in shifting from low productivity manufactory to high productivity service activities they also enhanced their per capita product.

#### IV

In Central-East Europe therefore the ‘new’ economic regime established during the years ca. 1250-1392 continued in operation during the years 1412-1455 and 1463-1520 in much the same form. The region remained throughout this period a producer of primary products, precious (gold and silver) and base (copper and tin) metals and agrarian wares- wax and furs and latterly wine and cattle. A burgeoning volume of these wares passed to merchants, who during the years 1325-1392, 1412-1455 and 1463-1520 operated in a spatially extended international economy characterised by low transactions costs. Enriched by their commercial activity, these merchants embellished the towns, in which they lived and acquired a range of consumer goods- the wares of the butchers, bakers and candlestick makers-who organised into guilds, worked up local raw materials to satisfy this demand. In neither the commercial nor mining towns, however, did there evolve those manufactories-crafts and associated guilds providing a wider-range of consumer goods for the indigenous population of the region. These were imported from Western Europe where equally fundamental changes had also created a ‘new’ economic regime. In Western Europe town and country at this time existed in a symbiotic relationship involving the rural manufactory and urban distribution of wares, which passed to merchants, who also during the years 1325-1392, 1412-1455 and 1463-1520 operated in this spatially extended international economy characterised by low transactions costs. An increasing volume of Northwest European textiles in particular (predominantly Köln-Aachen cloths and South German barchant or fustian)<sup>32</sup> at this time were in these circumstances exchanged against Southeast European precious metals and agrarian produce,<sup>33</sup> as trade evolved in terms of regional specialisation and

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<sup>31</sup> I. Blanchard, *Mining, Metallurgy and Minting in the Middle Ages*, III, chapter 5, pp. 1089-1107

<sup>32</sup> H. Amman, “Deutschland und die Tuchindustrie Nordwesteuropas im Mittelalter”, *Hansische Geschichtsblätter*, LXXII (1954), pp. 1-63 and the same author’s study “Die Anfang der Leinenindustrie des Bodenseegebietes”, *Alemannisches Jahrbuch* (1953), pp. 251-313

<sup>33</sup> A Mittenweiser, “Rosenhaimer Viehhandel in Spätmittelalter” in A. Uschel (ed.) *600 Jahre Rossenheim: Festschrift zur freier der 600 jährigen Marktfreiheit, 1328-1928* (Rosenheim, 1928), pp. 11-16; W. von Stromer, “Zur Organisation des transkontinental Ochsen- und Textilhandel in Spätmittelalter: Der Ochsenhandel des Reichserbkammers Konrad von Weinsberg anno 1422” in E. Westermann (ed.), *Internationaler Ochsenhandel, 1350-1750: Akten des 7<sup>th</sup> International Economic History Congress, Edinburgh 1978* (Stuttgart, 1979), pp. 171-195; A. Kubinyi, “Die Städte Ofen und Pest und der Fernhandel am Ende des 15. und am Anfang des 16. Jahrhunderts” in I. Bog (ed.), *Der Aussenhandel Ostmitteleuropas, 1450-1650: Die ostmitteleuropäischen Volkswirtschaften in ihren Beziehungen zu Mitteleuropa* (Köln-Wien: Die Vortage der I Tagung des Seminars für Sozial und Wirtschaftsgeschichte der Philipps-Universität zu Marburg an der Lahn, 1971), pp.35ff. F. Irsigler, *ibidem*, pp. 219-220.

comparative advantage. The evolution of such manufactories-crafts and associated guilds in the towns and country of East- Central Europe accordingly aborted as consumers there bought cheap, high-quality Northwest European textiles and metal wares as well as exotica acquired from outside of Europe.