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## TWO

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### THE ECONOMIC MEANING OF WAR AND PROTECTION

Because wars reduce national wealth in many ways it is often said that even for the victors wars never pay and never have paid except under quite primitive conditions. On the other hand, one of the ways in which an individual may gain his livelihood is by specializing in the use of force, and history records many groups of men famous mainly for their efficiency in war who gained relatively great wealth. Of course they had to live in a society with others engaged in occupations more commonly called productive. Can not a nation, living in a relation of give and take with other nations, similarly add to its income by showing superiority over others in its ability to use force? Some of its capital and labor will have to be diverted from other employments, but it may be argued that under some circumstances war is the employment which will be most productive of national income. Although economists have done little to define the conditions under which the use of force may be the most advantageous of occupations, their usual method of theoretical analysis seems applicable to this problem so long as it is admitted that the use of force may be productive of a utility. That utility is protection.

Every economic enterprise needs and pays for protection, protection against the destruction or armed seizure of its capital and the forceful disruption of its labor. In highly organized societies the production of this utility, protection, is one of the functions of a special association

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or enterprise called government. Indeed, one of the most distinctive characteristics of governments is their attempt to create law and order by using force themselves and by controlling through various means the use of force by others. The more successful a government is in monopolizing all use of force between men within a particular area, the more efficient is its maintenance of law and order. Accordingly, the production of protection is a natural monopoly. The territorial extent of this monopoly is prescribed more or less loosely by military geography and historical circumstances. Breaks in the monopoly occur, as when there is an insurrection or a boom in the rackets of gangsters, but such rival enterprises in the use of force substitute monopolies of their own if successful. These illegal monopolies may be quite transitory and highly localized, perhaps as fleeting as that of the stick-up man who finishes his robbery before the policeman comes around the corner. When, as in that extreme example, no protection is given against immediate additional seizure by the same bandit or some other user of violence, it is a clear case of plunder. Both the history of nations and the stories of gangsters contain plenty of borderline cases, but clearly force is not only used in plundering but also in preventing plundering, and a government which maintains law and order is rendering a service in return for the payment it collects.

The cost of producing this service varies greatly and affects the size of the real national income since the amount of goods and services other than protection which can be distributed to the nation is reduced when more capital and labor is employed in the production of protection.<sup>1</sup> Sometimes, as in the recent Spanish civil war, internal conflicts prevent any single enterprise from securing general recognition as the only legitimate monopolist of force and so reducing its costs. Sometimes fear of powerful neighbors causes more to be spent on arms. In the United States the amount of our nation's capital and labor now being employed for the production of protection is strikingly larger than the amount so employed a few years ago. Some nations have lower protection costs than others because of their cultural heritage or geographic position. A nation with easily defended frontiers, for example, may have a lower protection cost due to this gift of nature. The United States still devotes to the production of other goods a larger proportion of its productive capacity than does Great Britain, and our

geographic position has, so far, enabled us to enjoy more protection while paying less for it.<sup>1a</sup>

Thus broadly stated from a national point of view, the importance of protection as a factor in production is easily recognized. But from the point of view of private economic enterprises the relation is frequently obscured. The ordinary economic enterprise operating within the territory of a government which has a monopoly of the use of force pays for protection in the process of paying taxes. Of many an individual entrepreneur it can be said that he does not normally "vary the *amount* of 'law and order,' or security, by variations in the taxes he pays." To him, ". . . law and order is in general a free good, in the sense that any payment which must be made for it will presumably come out of general taxation and will not be counted as specific expense of production at all."<sup>2</sup> In this way economists generally dismiss protection from their calculations. But even for individual economic enterprises, protection costs are variable and to a significant extent affect the earnings of such enterprises. What they pay in taxes can in some cases be reduced by paying for protection in some other form—by lobbying, by bribes, or even by revolution.<sup>3</sup> To be sure, changes in protection cost are not often effected by an individual entrepreneur acting by and for himself alone. They are generally effected by group decision and group action. The decisions are made by governments in consultation with and for the benefit of a group of enterprises. They involve action in the forum and perhaps on the battlefield as well as in the market place or factory, but in so far as they are attempts to gain a utility at minimum cost they are subject to economic analysis. When an associate of Cecil Rhodes estimated that "good government" in the Boer states would bring a saving of six shillings per ton on gold ore production costs and an increase in consequence of \$12,000,000 a year in dividends,<sup>4</sup> we may say that protection was being included by an entrepreneur among the factors of production and the principle of substitution was about to be applied.

For individual enterprises engaged in international trade protection hardly ever appears a free good. Costs of protection are vital factors in production since their variations frequently determine profits. Competing enterprises are subject to different governments, and pay in taxes and tariffs different costs of protection. Usually they pay at least

two governments for protection and not infrequently they hope that the action of one government, which they call their own, will effect a reduction in what they pay to another government. For that purpose they can afford to increase their payments to their own government if their total protection costs, the sum of their payments to both governments, will be reduced.

To isolate the element in business profits which results from minimized protection costs, imagine a case of various enterprises competing in the same market and having the same costs except that they pay different costs of protection. The sale price of their product will be high enough to cover the highest protection cost, namely that of the marginal producer whose offering is needed to satisfy the demand. The profits of the enterprises enjoying lower protection costs will include the difference between their protection costs and that of the marginal competitor. This difference I will call protection rent. Just as differences in the fertility of land result in rents to owners of more fertile fields, so differences in the ease of securing protection result in returns to enterprises which enjoy cheaper protection, returns for which the best name seems to be protection rent.<sup>5</sup>

The simplest illustration of such a protection rent is provided by enterprises competing under a tariff differential. For example, Hawaiian sugar was admitted to the United States free of duty from 1876 to 1890 while to meet the American demand much sugar was being imported from Cuba or Java. These full duty imports were the marginal supply and fixed the price. The Hawaiian producers received a protection rent of two cents a pound.<sup>6</sup> Other examples abound in the history of the wealth of nations and the analysis of a few instances in which protection rents determined major changes in international trade will assist an analysis of the possibilities of increasing national income by the use of force.

The Venetians obtained in 1082 a charter exempting them from all tariffs in the Byzantine empire and thus secured a differential in their favor even against the Greeks. These privileges were secured by placing the Venetian navy at the service of the Byzantine emperor in his war against the Norman king of Sicily. For more than a hundred years they were renewed or elaborated by continued use of Venetian arms, sometimes against the enemies of Byzantium, sometimes against the

Byzantine emperor himself to compel renewal of the charter. The privileges were used in trade between different parts of the Byzantine empire and between that empire and other markets of the Levant as well as in trade between East and West. The Venetians alone did not satisfy all demands for commercial interchange within so large a field. Although their earlier chief rivals, the Amalfitans, were soon reduced to insignificance, the Venetians continued to have competitors, not only the Greek and Jewish subjects of the Byzantine emperor, but also new groups, the Pisans who paid a tariff of 4 per cent and the Genoese who paid the usual 10 per cent until 1155 and then 4 per cent.<sup>7</sup> Since such merchants found the trade worthwhile they too must have been necessary to meet the demand. Among them were the "marginal producers." The Venetians were able to sell wares at prices which must often have been higher by reason of the higher protection costs of less privileged traders. Consequently the profits of the Venetian merchants in that area were swelled by fat protection rents procured for them by their government's use of its naval power.

At a much later date, the trade of the French West Indies at the time of Colbert illustrates how a government could, by changing protection costs, shift a carrying trade from one nation to another. The trade of the French islands was almost entirely in the hands of Dutch enterprises when Colbert became minister, and there is every indication that the Dutch would have had no difficulty holding their own against possible French competitors if there had been no appeal to force. Under Colbert's direction the Dutch trade was declared illegal and a fleet of three vessels was sent to seize any Dutch ships visiting the French islands. This caused the Dutch some loss, threatened them with more, and increased the cost of protection of those who continued to trade as smugglers. When Colbert died, some two hundred French ships were receiving passports each year for voyages to the French West Indies. The rise in the protection costs of the Dutch had made the trade profitable for French enterprises by giving them protection rents.<sup>8</sup>

But profits for French enterprises trading to the West Indies, or for Venetian enterprises trading in the Byzantine empire, did not necessarily mean a profit for France or Venice as a whole—did not necessarily mean any increase in the totals of their national incomes. To consider the effects of these uses of force on national income, a way must be

found to balance against the protection rents of the Venetian traders in the Byzantine empire the cost of the naval action which secured their privileges, to balance against the profits made by French traders to the West Indies such expenses as that of maintaining naval squadrons there. In short we must investigate the *national* protection costs in these cases. And we must first inquire further into what is to be included in these costs and what additions to national income besides protection rents they may produce.

When we adopt this point of view we can hardly avoid stretching the meaning of the word protection to include aggressive action. The cost of using armed force at sea and in lowering foreign tariffs must be counted, although protection on the high seas is not a natural monopoly and international trade, by definition, extends beyond the territory of any single government monopoly. In this connection there are some protection costs which are obviously defensive—such as the cost of convoys to ward off pirates; others—such as the cost of capturing ships of other nations engaged in competing enterprises—might be called offensive protection costs. But it would be useless to try to classify the suppression of smuggling as offensive or defensive action. Whatever the verbal contradiction involved in applying it to aggressive actions, one term is needed to cover both what a government spends to prevent the plundering of its own enterprises and also what it spends in plundering enterprises of other nations; in attempting to create protection rents for its own enterprises, or in extending its monopoly of force so as to levy tribute.

By tribute it means payments received for protection, but payments in excess of the cost of producing the protection. The possibility of tribute arises from the fact that a government, like many another monopoly, does not need to sell its product at the cost of production. Most governments have been so constituted that ruling classes have been able to exploit these monopolies and raise the price of protection for other classes so as to increase their own incomes.<sup>9</sup> The tribute collected by one class from another need not in itself change the total of national income. It may merely move money from one pocket to another within the nation.<sup>10</sup> But tribute may be collected from outside the nation, and the income of a nation is increased by any sums which its ruling class is able to collect as tribute from members of some other

nation. The Venetian penetration of the Byzantine empire, for example, came to a dramatic climax in 1204. Finding a large supply of armed force, the knights of the Fourth Crusade, available for its purposes at bargain prices, Venice employed them to overthrow the Byzantine empire and seize a portion of it. By that conquest the Venetians not only arranged to collect their protection rents for many more years but they also secured a sensational amount of booty and were enabled to levy tribute in the portion of the empire which passed under Venetian dominion. This tribute was paid by Greek subjects in taxes or in servile services and was received by Venetian nobles as manorial revenues or as salaries of government offices. Since it is readily admitted that plunder and tribute added to national wealth in earlier times, this conquest has been much emphasized. But the tariff privileges of the Venetians had gained them much wealth from the Byzantine empire before they became strong enough to overthrow it; the growth of wealth in Venice during that period as a whole came less from booty and tribute than from protection rents.

The variety of uses to which may be put the force organized by governments makes the national cost of protection an overhead cost and creates the practical difficulties involved in allotting such costs. When the Venetians were fighting the Norman king of Sicily in 1081-4, they were acting not only to secure privileges in the Byzantine empire but also to prevent the king from extending his rival monopoly of force over both sides of the Adriatic and Ionian Seas. Had he succeeded he would have been able to take plunder and tribute from the Venetians. The problem of allotting the cost of an army or navy is as difficult a problem in cost accounting as allotting the cost of a dam among its various uses for power production, irrigation, and flood control, but perhaps no more difficult. Defense of the home territory against the devastation of invasion may be compared to the prevention of floods in a populous country. At least such defense may be accepted as a starting point. Additions to national protection costs beyond that point may be judged profitable or unprofitable according to the amount they add to national income in the forms of booty, tribute for the ruling class, or protection rents for privileged private enterprises. Colbert created a navy larger than was needed to prevent the plundering of France; its cost was predicated on the desirability of extending France's commer-

cial and colonial empire. The cost of the portion of the navy used in the West Indies may fairly be allotted to whatever France gained by that commerce.

In estimating the cost to the nation of any acquisitions of booty, tribute, or protection rent, it is particularly important, and difficult, to reckon the opportunity costs. Allowance must be made for any violation of the law of comparative advantage involved either in the military effort or in the new enterprises created by the stimulus of the protection rents. For it is evident that all tariffs and forceful restraints involve less income immediately for someone than would have been gained if everyone concerned had acted freely, peacefully, without restraining or being restrained by force, and with a perfect eighteenth-century reasonableness. As Adam Smith argued so convincingly in regard to similar cases, West Indian wares could have been sold more cheaply in France, and European wares would have been cheaper in the West Indies, if that trade had been left to the Dutch and if the French capital and labor, which was in fact diverted to the West Indies trade, had been allowed to find employment according to "the system of natural liberty." The protection rents of the new French enterprises were being paid for not only in royal expenditure on the naval squadron but also in higher prices paid by consumers both in France and in the French West Indies. On the other hand, the protection rents of Venetian traders in the Byzantine empire, although dependent on the higher prices produced by the duties levied on their competitors, were not paid for in the main by Venetian consumers since relatively little of the merchandise found its ultimate market in Venice. The cost of the violation of the law of comparative advantage was borne by foreign consumers and was therefore no deduction from Venetian national income.

The only substantial opportunity cost to the Venetians was the opportunity cost of the war fleets by which their privileges were won. If the capital and labor employed in those war fleets had been secured by bidding for them in an open market against competing demands for their use in other activities—such as continuance of the trade without special privilege—then there would be no opportunity cost requiring special investigation. But most war fleets are not secured simply by competitive bidding in a free market and their costs are not therefore fully expressed by figures in a government budget. Although Colbert's

navy was partly paid for at market prices and the squadron sent to the West Indies was too small to make the difference of great weight, the Venetian fleets which fought for and against the Byzantine empire were major mobilizations of the maritime force of the nation. The government decided whether in a given year ships should be allowed to sail as usual or whether certain trades should be suspended and a fleet prepared for war. Roughly put, the choice before the Venetians was whether to withdraw their ships and crews from trade for certain years and use the same capital and labor during those years in fighting. The opportunity cost of a year's war was primarily the loss of the returns on a year's trade. War also risked damage to the ships and the loss of productive labor through casualties, but when successful, the Venetians may have made up for these losses by plundering the enemy.<sup>11</sup> Assuming they were going to have a successful campaign, the Venetian leaders might sometimes have calculated in the following terms: With our privileges, the employ of our merchants and seamen in the Byzantine empire in trade yields each year 20 percent more than it would if we had no privileges.<sup>12</sup> Employing those merchants and seamen as fighters for a year will mean a 100 percent loss of return from them for this year but it will be worthwhile if it secures us our privileges for five years or more. Of course the Venetians did not work out the problem precisely this way and the sources do not permit us to calculate it in exact accord with attested facts. But it illustrates how it was possible for the Venetian use of force in securing tariff differentials to be productive of increase in Venetian national income. During the century after 1082 Venetian national income did increase very substantially. Other developments of that century helped, especially the rise of Western markets for Eastern products. That aided all the seaboard cities of the Mediterranean which were intermediaries in the trade, but Venetian commercial enterprise was then focused particularly on the Byzantine empire and was very largely devoted to exchange within that empire and to the commerce between it and other markets of the Levant. To be sure, the Venetians acted partly for their own security, as has been explained, and our picture of how Venice grew rich in this general period is complicated by the events of the Fourth Crusade. Yet, everything considered, Venetian policy from 1082 to 1204 appears an unusually successful use of force to increase national income.

Colbert's capture of trade with the West Indies seems, by contrast, to have failed to produce any immediate gain in French national income. When we count all aspects of the national protection cost and the opportunity cost of the new enterprises, a formidable list of losses must be subtracted from the addition to national income embodied in the profits of traders to the West Indies. Besides the big deficit of the French West India Company which pioneered the voyage, there was the direct cost of employing a French naval squadron, and, since the exclusion of the Dutch from the West Indies was one reason for the outbreak of war between France and Holland in 1672, some part of the expense of that war would have to be included. To allow for national opportunity costs, the price of sugar to French consumers would have to be investigated, and if the islanders be considered part of the French nation, their losses in paying for supplies prices two or three times as high as those previously charged by the Dutch must be added. Even in authors highly favorable to Colbert the evidence presented indicates that a loss rather than a gain in national income resulted during Colbert's life-time from the capture of the trade.<sup>13</sup>

A case of attempting to increase national wealth by military power which presents enlightening similarities and contrasts with those just discussed was the temporary capture of the spice trade by the Portuguese. In the second half of the fifteenth century nearly all the spices reaching Europe from the Indian Ocean passed through the Red Sea and the lands of the Soldan of Egypt, paying him well for his protection on the way, before they reached the Venetians and other Europeans. After the Portuguese found the way to India around Africa, the Portuguese king decided to assume a royal monopoly of the most valuable spices. At the same time he attempted by armed force to bar the passage of all spices into the Red Sea. His success was not complete, but the destruction of some ships of Arab traders and the risk of capture for others was sufficient for some decades to raise greatly the protection costs of the Red Sea route. While he kept these costs up, the Portuguese king sold spices in the West at prices above those which the Venetians had charged in the later fifteenth century. So long as he raised the protection cost of the Red Sea route sufficiently, the king, as monopolist of the Cape route, could fix his price so as to secure the protection rent arising from the higher protection costs of his rivals.<sup>14</sup>

But in attempting to extend his government's monopoly of force over the Indian Ocean the Portuguese king assumed a heavy burden of expenditure which can properly be charged as protection cost to his own spice trading enterprise. The overawing of Indian princes, the seizing of trading posts, and the assertion of naval supremacy in the Indian Ocean were the king's means of raising the protection costs of his competitors, and such was the inefficiency of Portuguese methods of trade and government that these offensive protection costs soon proved excessive. The Ottoman Turks lowered tariffs in Egypt after they conquered it, and they challenged the Portuguese control of the Indian Ocean.<sup>15</sup> About 1560 a substantial part of Europe's spice imports again came through the Red Sea,<sup>16</sup> a sign that the protection costs of the Portuguese king were at times higher than those of his rivals on the competing route. Reviewing the economic history of the Portuguese in India and taking into account the military expenses, J. Lucio de Azevedo asserts: "The truth is that only in the period of conquest did India pay its cost . . ." and, then as he says, only by "booty, tribute, prizes, and the ransom of Moors."<sup>17</sup>

Tribute was an extremely important factor in this case and especially so if we shift our point of view to consider not simply the royal enterprise of governing and spice trading but the changes in Portuguese national income as a whole. When Lucio de Azevedo says that the cost of the Indian empire exceeded the receipts, he seems to include under the costs the salaries and pensions with which the Portuguese king rewarded the nobles who conquered and governed the empire. Whatever increase in the income of this ruling class came from charges levied on non-Portuguese subjects constituted an addition to national income. Royal officials in India did increase their revenue illegally also by booty, bribes, and private trade. This sort of corruption was probably the chief factor in undermining the profitability of the royal monopoly, but it was a positive factor in national income. Although in political or legal theory they were part of the royal enterprise, the corrupt officials were from an economic point of view acting as entrepreneurs on their own. Each sold for his own profit the protection of the force at his disposal. The revival of the Red Sea route was not an interference with their income but a sign that they preferred selling their protection for bribes to Arab traders instead of extending it to the

king's monopoly as they were supposed to do. If we count all the increased income of the ruling class, legitimate and illegitimate, booty and tribute as well as protection rent, there seems no doubt that Portuguese national income did increase for a time.

The opportunity cost remains to be considered. With the same geographical discoveries and the same skill in navigation, could Portuguese capital and labor have been used more profitably in another way than that to which it was directed by military action in the Indian Ocean? Although it is hard to see how the Portuguese could have followed "nature's simple plan" in this case, any more easily than the Venetians could have adopted such a plan in dealing with the Byzantine empire, some contemporaries did conceive policies requiring less military action. Observers at Venice—ironically enough now that Venice, three hundred years after the conquest of Constantinople, was no longer making wars pay—pointed out that the Portuguese might operate advantageously without attempting a monopoly of force, simply because the Cape route would enable the Portuguese to avoid the high customs levied in Egypt.<sup>18</sup> Instead, the Portuguese decided to seek their protection rents by raising the protection costs of possible rivals rather than by trying themselves to operate with protection costs below the existing level.<sup>19</sup> The consequent increase in the prices to Portuguese consumers of Indian products was of trifling importance since the bulk of these products was sold abroad. But less military action against Arab traders and the employ of more capital and labor in commercial activity might have increased the volume and the value of the Eastern wares which the Portuguese could offer for sale in Europe. Would the returns of such an expanded commerce have increased Portuguese national income more than it was increased by plunder, tribute, and the small trade actually developed?

To frame the question in this way suffices to suggest that a full estimate of opportunity cost involves two considerations which were passed over lightly in the cases discussed earlier. The first concerns the kind of capital and labor there was in Portugal, in other words nothing less than the character of Portuguese society in 1500. The activity in which the Portuguese then displayed superiority over other nations was not shrewd trading but bold adventuring both in navigation and in war. Because of the military and religious traditions of the Portu-

guese and their class structure, the crusading policy pursued in India may well have stimulated energies which obtained more wealth than the Portuguese could have gained by less bellicose means. A Venetian of 1500 was likely to believe that the Portuguese could gain more by a more peaceful policy because such might have been the case had the Portuguese ruling class been similar in character to the Venetian in 1500. At that date many Venetian nobles had become wedded to peaceful trade or to the management of country estates. They were no longer, as they had been three or four hundred years earlier when bullying Byzantium, equally efficient either as merchants or as sea raiders.

The second consideration is that two different answers are possible—one for the short run and one for the long run. The policy which the Portuguese adopted in India yielded so much tribute and plunder that a greater immediate increase in national income under a more peaceful policy seems improbable. But the king's attempt to conquer an Indian empire, and the closely connected decision to make the chief items in the trade a royal monopoly, diverted Portuguese capital and labor from the commercial development of the voyage and focused the energies of his people on war, plunder, and the taking of bribes and tribute. The large immediate rewards attracted the youth of the nation to these warlike activities which soon yielded diminishing returns. A royal policy which relied less on force and opened more opportunities for those with trading skill would have favored the development of mercantile capacities among the Portuguese. In the long run of a hundred or two hundred years these capacities might well have made Portugal richer. The possibility raises very complex questions since a change in the type of capacity possessed by a nation's labor, both managerial and manual, involves a basic change in social structure, in this case a decline of the military and a rise of the commercial and industrial classes. Because the ensuing centuries were to bring greater wealth to commercial and industrial nations, it is generally held that the conquest of India, although it increased Portuguese national income for a time, caused a decrease later by undermining the productivity of the nation's labor.

On the other hand, Colbert's West Indian policy, although in the

short run it decreased French national income, is generally judged successful in the long run. Within a century after his death, the West Indies "proved the most valuable colonial asset which France possessed and contributed more to her commercial prosperity than any other single branch of trade."<sup>20</sup> The particular type of labor and capital which Colbert fostered by providing protection rents for West Indian traders became in the long run of a hundred years exceptionally productive. The same can be said of many of his efforts. After describing Colbert's East India Company, Professor Cole concludes: "The value of navigators who knew the routes to the East, of merchants who could carry on the Indies trade, of agents who had learned oriental ways, were all assets which did not appear on the balance sheet, but which formed a significant contribution from the Company of Colbert to its successors."<sup>21</sup> By a variety of measures many of which depended on force of arms, Colbert increased the proportion of his nation's capital and labor devoted to oceanic commerce and to manufacturing. He often diverted capital and labor from employments in which they would have produced more national income at the time. But manufacturing and oceanic commerce were to become more and more profitable as they attracted more and more labor and capital. In so far as Colbert drew resources away from conspicuous consumption or from agricultural investments which were subject to the law of diminishing returns and directed them into commercial and industrial activities which were in the future to yield increasing return, his activity as a statesman did contribute to the future wealth of his nation.

This contrast between short run loss and long run gain is present in many cases of mercantilism. Against England's immediate losses from enforcing the Navigation Acts, losses from higher freight rates and from naval action, may be put some of the advantage which the size of the British merchant marine later gave many British enterprises. Against the immediate cost to the British of winning and holding colonial outposts may be balanced not only any immediate return in protection rents, but also some of the benefits of the internal economies made possible to British industries in following centuries by the size of Britain's overseas market. The recent continuator of the Smithian tradition, Alfred Marshall, admits that the national income of England

in the eighteenth century, and even more in the nineteenth century depended much on "the action of the law of increasing return with regard to her exports."<sup>22</sup>

During a long earlier period of history the chief hope of making war pay was tribute. In the Age of Mercantilism the wealth which governing classes took directly for themselves from other nations became relatively small. As economic life became less largely agricultural and more intricately organized through differentiated enterprises, the profits secured by favored economic enterprises came to form a larger part of national income. Tribute became less important than protection rents. The change made immediate success in increasing national income by military action less frequent, for protection rents were secured by violations of the law of comparative advantage which were usually to the detriment of all nations concerned. Yet in the long run military victories added more to national income when used to gain protection rent than when used to gain tribute. Tribute-paying empires yielded diminishing returns as they drew more manpower into the maintenance and extension of such conquests. The protection rents stimulated oceanic commerce and industries which found new markets from wider trade. In another epoch the premiums given commerce and industry might have been thrown away. In that particular period of social and technological change, the period of the expansion of Europe, those fields of enterprise yielded increasing return.

In more recent times the forms in which national income may be increased by military pressure on other nations have been enormously complicated and especially recently by exchange controls and marketing quotas. At the same time the armed forces used by governments have been consolidated into enduring military and naval establishments.

### THREE

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#### OCEANIC EXPANSION: FORCE AND ENTERPRISE IN THE CREATION OF OCEANIC COMMERCE

Among the other excellent and extraordinary gifts that God has given to human kind is the knowledge of the motion of the spheres, the course of the planets and stars, and of the climatic zones under which is placed this marvelous world machine. With this knowledge we furrow that very great element, the water, and betake ourselves into almost any part of the world that we wish, with the same facility as if there were in the wide ocean a fixed road showing signs of its use, and a through highway.<sup>1</sup>

#### I

These opening words of a Venetian treatise on navigation written about 1560 summarize the impressive technological achievement that made possible oceanic commerce. In considering what was the role of government and what the role of business enterprise in making highways across the oceans for man's use, one is tempted to give the easy answer that governments played the major role. The activities of Prince Henry and King John II of Portugal,<sup>2</sup> the voyages of Columbus, the development in the Spanish Casa de la Contratación of what C. H. Haring calls "a hydrographic Bureau and School of Navigation, the earliest and most important in the history of modern Europe"—all these

<sup>1</sup> Tasks of Economic History. Supplement to *The Journal of Economic History*, Volume X, 1950.