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## FROM DIRT TRACKS TO MODERN HIGHWAYS: TOWARDS A HISTORY OF ROADS AND ROAD TRANSPORTATION IN COLONIAL ZIMBABWE, 1890 TO WORLD WAR II<sup>1</sup>

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### Abstract

*This article traces the history of Zimbabwe's roads and road traffic sector from the turn of the century, when the country had no roads to speak of, until the Second World War, when the basic foundations for the present road system had been laid. It argues that during the Company period (up to 1923), very little was done to establish good roads. The Company was more concerned with promoting railway construction and either had no interest in building roads or was apprehensive of the likely competition to railways that would result from a good road network. It was only when Rhodesia attained responsible government status that serious attention was given to the development of roads in the country. The 1930s witnessed the replacement of old dirt roads with macadamized road surfaces as increasing traffic made dirt roads unsuitable. The article also examines the road regulations passed throughout the period under study and briefly analyses the type of labour used in the construction of roads in the country.*

THE CENTRAL IMPORTANCE of an efficient transportation system in the economic development of modern nations has long been widely acknowledged. Numerous detailed studies on the revolution in transport in 18th and 19th century Britain, America, Russia and elsewhere have explored the complex functional relationships between technological advances in transport and economic growth, and have demonstrated that the transport revolution was a key factor in the economic transformation of these countries.

Briefly, these studies have argued that nineteenth century industrialization in Europe and the United States was accompanied by the diffusion of better methods of transport which comprised, *inter alia*, macadamized roads, canals, and railways. They have also demonstrated that efficient transport not only reduced the costs of moving goods and people but also had numerous spin-off effects on the countries' economies

<sup>1</sup> Hereafter, pre-independence place names are used for the sake of convenience.

and that improved transportation also helped to break down geographical and social barriers and promoted competition.<sup>2</sup>

In contrast, scholars of Zimbabwe's economic history have tended to shy away from such studies, despite the fact that a good transportation system has historically been of crucial importance to a landlocked country like Zimbabwe, which has no seaports of its own and needs efficient roads and railways to transport its goods to and from the ports of neighbouring countries. Moreover, within the country, an efficient transportation network has been essential in order to link the scattered farms and mines to the main population centres, which form their markets as well as to facilitate easier communication and mobility for the country's population.

The crucial importance of transportation to Zimbabwe's economic well-being notwithstanding, a comprehensive historical analysis of the evolution and role of transportation in Zimbabwe has yet to be written. This is not to suggest that the field has been neglected altogether, for a number of studies on aspects of the history of transportation exist. For instance, I. Phimister, J. Lunn, A. Croxton, P. Maylam and others have published insightful studies on the history of the railways.<sup>3</sup> Regrettably, however, other forms of transportation have been largely ignored. While a recently published article on the history of civil aviation in Zimbabwe has addressed the hitherto totally neglected air transportation industry,<sup>4</sup> a history of roads and road traffic has yet to be written.

That the focus of scholars should have been mostly on railway transportation is not particularly surprising given the central role that railways played in the colonialists' imperial designs and the undisputed dominance of railways in the transport systems of the less developed countries where railways have often been seen as initiators of development

<sup>2</sup> Studies on the transport revolution in the United States and Europe are too numerous to cite here. Among the many studies on transportation in the United States are the following: G. R. Taylor, *The Transportation Revolution, 1815-1860* (New York, Reinhart, 1951); Carter Goodrich, *Canals and American Economic Development* (New York and London, Columbia University Press, 1961); Robert Fogel, *Railroads and American Economic Growth: An Econometric History* (Baltimore, Johns Hopkins Press, 1964); and Alfred D. Chandler Jr., 'The railroads: Pioneers in modern corporate management', in *Business History Review* (Spring 1965), XXXIX, 16-40. For a summary of the evolution of scholarship on transportation in the industrialized countries see Patrick O'Brien, *The New Economic History of the Railways* (London, Croom Helm, 1977).

<sup>3</sup> I. Phimister, 'Towards a history of Rhodesia railways', in *Zimbabwe History* (1981), XII, 71-100; J. R. Lunn, 'Capitalism and Labour on the Rhodesian Railway System 1890-1939', (Oxford, England, Oxford University, D.Phil. Thesis, 1986); A. H. Croxton, *Railways of Zimbabwe: The Story of the Beira, Mashonaland and Rhodesia Railways* (London, David and Charles, 1982); P. Maylam, 'The making of the Kimberley-Bulawayo railway: A study in the operations of the British South Africa Company', in *Rhodesian History* (1977), VII, 33; and A. M. Kanduza, 'Railway rates and capitalist agriculture in Southern Rhodesia 1918-1930', *Economic Symposium* (8-10 Sept. 1980), I.

<sup>4</sup> A. S. Mtambo, 'Civil aviation in colonial Zimbabwe 1912-1980', in *Zambezia* (1992), XIX, (ii), 99-116.

and 'modernization'. Railways were a major agent in imperial expansion in Africa, enabling the colonizing powers to establish and consolidate their political and military power over the subject communities and facilitating metropolitan capital's exploitation of the colonies' natural and human resources.<sup>5</sup> In the Zimbabwean case, in addition to the pioneer role outlined above, railways were for almost half a century, the only developed form of transportation as the country's air and road transportation systems were still in their infancy during that period. While railways continue to play a significant role in the economy of Zimbabwe, roads and road traffic have progressively assumed an equally important role. In their early phase, roads, where they existed, were mere adjuncts of the railway system which transported goods and people from the surrounding farms and population centres to the nearest railway stations. Gradually, however, they assumed a relatively separate identity and combined in their operations the dual functions of serving as feeder lines to the railways as well as being the railways' competitors.<sup>6</sup>

Given the importance of roads in the past and present development of the country, perhaps the time has come for scholarship to pay more attention to the history of this form of transportation which has hitherto been neglected. Indeed, apart from a 1986 thesis by an undergraduate of the University of Zimbabwe and T. C. Salmon's study published in *Rhodesian Engineer* in 1969,<sup>7</sup> detailed analyses of the history of road transport are conspicuous by their absence from published scholarship on the history of the country. Clearly, if we are to fully understand the economic history of Zimbabwe, we need to know how the country's transportation network, in its entirety, contributed to the shaping of that history.

## OBJECTIVES

Using archival sources, government publications and secondary sources, I attempt, in this article, to provide a general institutional history of Zimbabwe's road system in the colonial period, highlighting the major benchmarks in the development of the country's road transport. I hope,

<sup>5</sup> E. J. Taafe *et al.*, 'Transport expansion in underdeveloped countries: A comparative analysis', in B. S. Hoyle (ed.), *Transport and Development* (London, Macmillan, 1973), 14ff; A. M. Oconnor, 'Recent railway construction in tropical Africa', in B. S. Hoyle (ed.), *Transport and Development*, 139-141.

<sup>6</sup> Indeed, by the 1930s, the railway authorities were already bitterly complaining that the country's road motor transport services were undermining the operations of the railways by offering cheaper transportation rates. National Archives of Zimbabwe [Hereafter called NAZ], S482/470/39, PM, Railways: General, Road Motor Transport: Competition With the Railways.

<sup>7</sup> S. Mushunje, 'The Development of Roads and Road Transport 1890-1940s', (Harare, University of Zimbabwe, Economic History Dept., B.A. Honours Dissertation, 1986); T. C. Salmon, 'A short history of Rhodesian roads: From veldt track to strip road', in *Rhodesian Engineer* (September 1969), VII, (v), 849-851; and (November 1969), V, (xiii-xv).

with this article, not only to fill the gap in the available scholarship on the history of road transportation in Zimbabwe, but also to stimulate further research on the evolution of the country's transportation and communication industries and their impact on the nation's economy.

Before such in-depth studies can be undertaken, however, we must begin at the beginning and trace the development of the country's major transportation and communication systems; unless this aspect of Zimbabwean history is fully understood, no meaningful impact studies can be generated. This paper is meant to make a modest contribution to the as yet small but growing fund of knowledge on the evolution of the country's transportation system.

#### ROADS AND ROAD TRAFFIC, 1890-1939

Students of Zimbabwe's railway development have demonstrated the British South Africa Company's (BSAC) determination, for a variety of reasons, to establish a railway line that would link Central Africa to the ports of South Africa and Mozambique. In the years following colonization, railway construction into Central Africa remained one of the most important pet projects of the BSAC shareholders and administrators. Consequently, the Company sponsored a number of railway companies, raised the necessary funds through the issue of debentures and pushed railway contractors to extend the line further into the Central African interior. By the end of Company rule in 1923, Zimbabwe's main railway network was already in place, although other branch lines were to be added later.<sup>8</sup>

In contrast, not as much attention was given by the BSAC to establishing and developing the country's roads. Indeed, throughout the first decade of Company rule, the country's roads were little more than dirt tracks which had hardly improved from the rudimentary trails made by the wagons of White adventurers and hunters who had traversed the country before 1890.<sup>9</sup> In 1891, in a bid to construct more usable roads, the British South Africa Company contracted one Frank Johnston and his associates, one of whom was F. C. Selous, to construct a good wagon road to Mount Hampden, just outside Salisbury, to erect forts and to keep the country's communication lines open.

Under the supervision of Selous, the contractors soon built the road from Charter to Salisbury through 'Marondellas' and from Charter to Chimoi via Umtali. Selous's main accomplishment, however, was the

<sup>8</sup> J. Lunn, 'Capital and Labour'; I. Phimister, 'Towards a history of Rhodesia railways'; G. Pauling, *The Chronicles of a Contractor* (London, Constable, 1926); P. Maylam, 'The making of the Kimberley-Bulawayo railway', and Baron E. B. D'Erlanger, *The History of the Construction and Finance of the Rhodesian Transport System* (London, Privately published, 1939).

<sup>9</sup> T. C. Salmon, 'A short history of Rhodesian roads', 849.

main road from Fort Tuli to Fort Salisbury. Other roads constructed at this time were the 120-mile-long road from Bulawayo to Tati, the Bulawayo-Charter-Salisbury road and the Moodie Trek running from Fort Victoria eastward. These were constructed between 1892 and 1895.<sup>10</sup>

Travelling on these dirt roads was reportedly a veritable adventure as ox-drawn wagons, the main form of transport then,

had to plough through deep sand or be man-handled over stretches of black clay. . . [and] where the track was fairly smooth, dense clouds of dust choked everything and reduced Europeans and Africans alike to a uniform grey.<sup>11</sup>

So rudimentary and primitive were these roads that sometimes it was difficult for road users to tell them apart from the animal spoor around them, for as one Sir Crawford Douglas-Jones noted:

One of the chief difficulties [for road users] was that of keeping to the road they wished to follow. On leaving a town, the track would be distinct and easy to follow but a few miles out, unless one was familiar with the road, it became difficult to decide which was the correct way, either the well-defined spoor or the indistinct one often hidden in the tall Tambookie grass.<sup>12</sup>

Worse still, during the rainy season, interminable delays, sometimes of up to six weeks, were not uncommon due to flooded rivers which forced travellers to bide their time until the rivers were passable once more. Not surprisingly, the journey from Salisbury to Tuli took three to four weeks, while the journey from South Africa to Salisbury could take as long as four months or more. As if the primitive condition of the roads was not enough trouble, travellers faced added hardships with the rinderpest outbreak at the turn of the century which decimated the country's draught power.<sup>13</sup>

In an effort to resolve the problem one enterprising settler, Lt-Colonel J. Flint, imported 20 baggage and 14 riding camels and the requisite number of Sikh attendants in 1903. The camels' usefulness proved very short lived, however, for in the words of one commentator:

Alas, Rhodesia's ships of the veld never really set sail; within a few months one camel had died of what was a fairly common complaint in Rhodesia in those days — cirrhosis of the liver — and later foot and mouth disease broke out among the others.<sup>14</sup>

<sup>10</sup> B. Whyte, 'From wagons to wings', in *Illustrated Life Rhodesia* (1972), IV, xxiv, 16-31; 'Transport in Rhodesia: Road, rail and air', *Rhodesia Property and Finance Supplement* (Jan. 1970).

<sup>11</sup> B. Whyte, 'From wagons to wings', 19.

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*, 10-19.

<sup>14</sup> *Ibid.*, 17-19.

It was not only the main roads linking the country's towns which were in poor condition, for it was also reported that, even in the towns, the roads were in such an appalling state that many settlers resorted to the use of bicycles. An amusing account is given of the famous Rudyard Kipling's experience when riding a bicycle on Bulawayo's streets one day when it was reported that,

[Kipling] hired a bicycle from Dulys for 7s 6d and set off for the Ungusa Hotel, where he arrived with a flourish. In a spirited moment he took a running leap over the low railing of the verandah. His style was admirable, but sad to relate, he lacked altitude and caught the top in his flight, landing heavily on a flower bed.<sup>15</sup>

The country's road system remained poor even after the Chartered Company Government created the Roads Department in 1895. Operating as a sub-section of the Public Works Department and administered by the Secretary for Mines and Roads, the Roads Department was given the onerous task of constructing and maintaining roads throughout the country. The task was to prove very difficult to fulfil mainly because, for many years, the department remained underfunded and possessed neither the necessary manpower nor the required road construction equipment. It is not surprising, therefore, that the department accomplished little before the First World War.

Nine years after its formation, the department had no more than a handful of White employees comprising the Engineer in charge, one Inspector stationed in Matabeleland and six Overseers. The total number of African labourers who were expected to service the entire country was approximately 240 people. With respect to construction and maintenance equipment, the picture was none too bright either. In 1914, the department had a total transport fleet of only 39 scotch carts and 89 mules. Because of inadequate resources, the department managed to establish only a few earth roads and had built a total of only seven footbridges by 1914.<sup>16</sup>

The unsatisfactory condition of the country's roads at this time was strongly deplored by the settler farming community at its 1911 Convention held in Umtali, where several speakers complained about the unprofessional manner in which the Roads Department conducted its business and the generally unserviceable state of the nation's roads. It was pointed out that inexperienced and unqualified people were appointed to the department and were left to do as they pleased without any meaningful supervision, and that road construction and maintenance work was being carried out in a half-hearted and haphazard manner.<sup>17</sup>

<sup>15</sup> *Ibid.*

<sup>16</sup> T. C. Salmon, 'A short history of Rhodesian railways', 850.

<sup>17</sup> Farmers' comments cited in S. Mushunje, 'Roads and Road Transport', 4.

One of the strongest criticisms came from George Dyke of Hartley, who complained that the poor roads were hampering economic development, discouraging immigration and making life unnecessarily difficult for the settler farmer. He pointed out:

One of the first things noticeable [in] the colony is the lack of [road] communication from centre to centre . . . to the new settler, it is clearly and forcibly apparent that, although he may be able to raise marketable produce, how to get it to the market will be one of his most difficult and expensive operations, so much that in some cases every item of what should be profit has vanished before it is finally disposed of.<sup>18</sup>

In her 1986 study, S. Mushunje points out that the lack of a sufficiently developed national road system also affected the pattern of White settlement as immigrant farmers tended to prefer establishing themselves along the railway lines, not necessarily because the soils in their chosen areas were better suited to agriculture, but because of transportation problems they were likely to face if they settled in the more outlying areas.<sup>19</sup>

Throughout the Company years, farmers continued to demand better roads, particularly as they felt that the railways were taking advantage of their monopoly position as the sole carriers of goods within the country to charge unacceptably high transportation rates. Complaints became more vociferous following the increase in railway freight rates in 1916 when the rate on grain was hiked by 100 per cent from 1d to 2d. In 1918, farmers complained bitterly about the railways' failure to give sympathetic treatment to Rhodesian farmers to enable them to exploit the lucrative Johannesburg market. In a recent study, A. Kanduza attributed the rates controversy to the resentment by 'settler capitalist farming (to) a process in which it saw that its reproduction and expansion were handicapped by high railrage which reduced the competitive capacity of its commodities in local and outside markets'.<sup>20</sup>

Despite the mounting pressure from the settler farmers, the Company still did not do much, at least in comparison to its efforts in promoting railways, to speed up road construction, either because it lacked the resources or because, as the owner of the nation's railway system, it was reluctant to promote road transportation which would inevitably compete

<sup>18</sup> 'Rep. of congress — Umtali' in *Rhodesia Agricultural Union Handbook* (1911), cited in S. Mushunje, 'Roads and Road Transport', 4.

<sup>19</sup> *Ibid.*

<sup>20</sup> Several good studies of the rates controversy exist. Among these are J. Lunn, 'Capitalism and Labour'; A. M. Kanduza, 'Railway rates and capitalist agriculture', and M. E. Lee, 'Politics and Pressure Groups in Southern Rhodesia 1898-1923', (London, University of London, D.Phil Thesis, 1974).



with the railways. Thus, as late as 1919, the Roads Department was still inadequately equipped for the task assigned to it as can be seen from the 1919 Report on Roads, which stated that the Roads Department had carried out repairs on over 1 550 miles of roads in that year but noted that if it 'had been more fully equipped with carts, mules and oxen, more permanent work would have been undertaken'.<sup>21</sup> The situation did not improve substantially thereafter, despite the appointment of an Engineer-in-Charge of Roads in 1919.<sup>22</sup>

In a bid to encourage district authorities to contribute their fair share to the road construction programme, the government passed the Road Councils Ordinance in 1921. The Road Councils Ordinance provided for the creation of road councils throughout the country and ruled that the government should give financial aid to such councils through a grants-in-aid system on the £ for £ basis. District councils were rather slow to respond to this law and it was not until 1923 that the first Road Council was established in Que Que.<sup>23</sup>

The reluctance of the country's district authorities to take advantage of the new law was mainly because of the economic depression of the early 1920s which resulted in a slump in the market prices of cattle and agricultural products. Farmers were thus unwilling to introduce road councils immediately since this would mean increased taxation at a time they could ill afford to pay and preferred to wait until economic conditions became more propitious.<sup>24</sup>

Throughout the Company period, labour for road construction and maintenance was supplied primarily by African convict gangs and conscripted African labourers who worked under the supervision of a handful of White overseers. The 1919 report, for instance, stated that the department was employing five permanent convict parties for road construction work, four of which 'were fifty-strong, with necessary guards . . . and one party twenty-five in number'. In addition, 'small convict parties' were employed throughout the country 'under the supervision of the Magistrates or Assistant Magistrates'.<sup>25</sup>

<sup>21</sup> Southern Rhodesia, *Rep. on Roads by the Secretary for Mines and Works, 1919* [Presented to the Legislative Council, 1920] (Salisbury, Govt. Printer, 1920).

<sup>22</sup> T. C. Salmon, 'A short history of Rhodesian roads', 850.

<sup>23</sup> *Road Councils Ordinance, 1921*; T. C. Salmon, 'A short history of Rhodesian roads', 850; Bindura, Shamva, Marandellas. Glendale, Concession, Norton and Bromley had also established road councils by 1926.

<sup>24</sup> Southern Rhodesia, *Rep. of the Public Works Department, 1921* [Presented to the Legislative Council, 1922] (Salisbury, Argus Printing and Publishing Company Ltd., 1922); T. C. Salmon, 'A short history of Rhodesian roads', 850; 'Transport in Rhodesia'.

<sup>25</sup> Southern Rhodesia, *Rep. of the Public Works Department, 31st March 1904* [Presented to the Legislative Council, 1904] (Salisbury, Argus Printing and Publishing Company, 1904); Southern Rhodesia, *Rep. on Roads by the Secretary for Mines and Works, 1919* [Presented to the Legislative Council, 1920] (Salisbury, Govt. Printer, 1920).

By 1922, the department was utilising both convict and free African labour; the first concentrating on permanent road work, while the latter moved about the country carrying out light road repairs. There were eight convict gangs of between 25 and 50 men each and 12 free-labour road parties in all. In addition, nine smaller convict gangs, ranging from 12 to 20 units, worked at different centres under the supervision of local magistrates.<sup>26</sup>

During this period, the Company government passed a number of road laws, the most important of which were the Outspan and Road Ordinance (1898); the Width of Steel Wheel Ordinance (1916); the Road Councils Ordinance (1921) and Vehicle Tax Ordinance (1921). The Outspan and Road Ordinance reflected the primitive nature of the country's roads in this early period when wheeled traffic shared the same roads with livestock. It merely decreed that,

All public roads and roads declared by the Administrator to be open shall be . . . 100 feet wide and, if unfenced, loose cattle and horses driven along any such road may travel on either side of such road, to a distance of at least one hundred feet without being liable for trespass or for injury done to crops within that distance.<sup>27</sup>

The Width of Steel Wheel Ordinance was intended to stem the growing problem of 'rutting' of the roads during the wet season by wagons with narrow wheels. It ruled that, henceforth, only wagons fitted with tyres not less than four inches in width would be permitted on the country's roads. The Road Councils Ordinance of 1921, as already shown, provided for the creation of road councils throughout the country to oversee the construction and maintenance of district roads, while the Vehicle Tax Ordinance of the same year imposed a tax on all vehicles using the country's roads in order to raise funds for road maintenance.<sup>28</sup>

By the end of Company rule in 1923, the country's road system was still relatively primitive, although a number of gravel roads had been constructed throughout the country and travel was no longer as hazardous as it had been earlier in the century. With all its shortcomings over the years, the Roads Department had managed to construct over 8 000 miles of public roads by the time it was transferred from the Public Works Department to the newly created Secretariat for Mines and Works in

<sup>26</sup> Southern Rhodesia, *Rep. of the Public Works Department, 1922* [Presented to the Legislative Council, 1923] (Salisbury, Govt. Printer, 1923).

<sup>27</sup> NAZ, L2/2/129, Outspan and Road Regulations, 1898.

<sup>28</sup> *Width of Steel Wheel Ordinance, 1916; Road Council Ordinance, 1921; and Vehicle Tax Ordinance, 1921.*

1922.<sup>29</sup> However, much still remained to be done before the country could claim to have an efficient and viable road system. This task was left to the incoming responsible government.

#### ROADS AND ROAD TRAFFIC, 1923-1940

Road construction registered major advances in the post-Company period as successive governments made serious efforts to expand and improve the country's road network in order to promote White settlement and economic development. From 1923, government funding for road construction and maintenance increased steadily from the sum of £15 000 which was allocated to the Roads Department in that year to £58 000 in 1924, £112 000 in 1926, rising to £202 000 by 1927.<sup>30</sup>

Government policy in this period, according to the Minister of Mines and Works, in a speech to the Legislative Council in 1930, was to focus primarily on the country's main roads, while rendering limited support to District Road Councils in their efforts to develop country roads as per terms of the 1921 Road Councils Ordinance. In his words:

The (government's road) programme, is first of all, to take charge of the trunk roads . . . the main arteries of the country . . . Next to that, the policy is to take charge of the main roads between different centres i.e. Salisbury and Bulawayo, Salisbury and Umtali . . . Then we give assistance to road councils in road council areas and pay on a £ for £ basis with them in keeping up roads they themselves make.<sup>31</sup>

The result of the government's policy, however, was to produce roads of varying quality within the road system. While those roads funded directly by the government were always well maintained, the quality of roads under the control of District Road Councils varied according to the economic status of the residents of those localities. In well-to-do White districts, roads were generally well maintained, but those in the resource-starved African Reserves tended to be poor. This is not surprising given the fact that, out of the £112 000 allocated to the roads in 1926, African areas throughout the country received a total of only £1 000.<sup>32</sup>

<sup>29</sup> Southern Rhodesia, *Rep. on Roads by the Acting Secretary for Mines and Works for the Year 1922* [Presented to the Legislative Council, 1923]; 'Transport in Rhodesia'; T. C. Salmon, 'A short history of Rhodesian roads', 850.

<sup>30</sup> NAZ, LE 3/1/1, Folios 728-733, Moffat to Coghlan, March 1926; *Rep. of the Chief Road Engineer for the Year Ended 31st December 1937*.

<sup>31</sup> Southern Rhodesia, *Rep. by the Secretary for Mines and Works on Roads, 1930* (Presented to the Legislative Council, 1931).

<sup>32</sup> NAZ, S138/27, Transport and Road Building, 1923-31.

Furthermore, while road parties working on the main roads and the roads in the well-to-do White districts were generally well-equipped and increasingly becoming mechanized, road construction gangs in the African areas, until the Second World War, had to make do with whatever was at hand. Road work in the African areas was carried out by unpaid African labourers who worked under coercion and were expected to supply their own food and a variety of hand implements such as hoes and axes. Although road duties were normally performed by African males, women and children were not entirely exempt from such labour demands as they were sometimes press-ganged into road work.

For work on the main roads, the Roads Department depended, initially, on convict gangs as had the Company government previously. The Under-Secretary for Mines and Works reported that in 1923 approximately 11 convict gangs, comprising 600 convicts, were working on permanent road construction, while nine smaller convict gangs worked in the various parts of the country. He expressed his gratitude to the Law Department, which he commended for its assistance in 'arranging for the employment of as much convict labour as is available' and expressed the hope that 'by re-arrangement and by the provision of more portable lock-ups, the services of every available convict will be utilized on the public roads of the country'.<sup>33</sup>

A year later, however, the wisdom of the continued use of convict labour on road construction was being questioned. It was pointed out that utilizing convict labour was too costly because of the need to provide portable lock-ups and the necessary supervision and that 'the absence of personal incentive to get through their work, diminished their value as labourers'. It was thus resolved that, save for two convict gangs of 75 long-sentence prisoners which would be stationed in semi-permanent camps near Bulawayo and Salisbury respectively, all future road work would be carried out 'by selected paid labour parties'.<sup>34</sup>

As convict gangs were phased out, more free labourers were engaged so that by the end of 1926, African labourers in the Roads Department amounted to 3 425. Thereafter, as the road network expanded, so did the number of Africans employed by the department increase to 4 055, 9 230 and 10 962 in 1934, 1935 and 1936 respectively. In the early 1930s, as part of the government's efforts to provide unemployment relief to White workers who had lost their jobs due to the Depression, a number of White

<sup>33</sup> Southern Rhodesia, *Rep. on Roads by the Secretary for Mines and Works, 1922, 1923 and 1924*.

<sup>34</sup> Southern Rhodesia, *Rep. by the Secretary, Department of Mines and Public Works, on Roads for the Year 1924 (Presented to the Legislative Council, 1925)*.

and Coloured labourers were temporarily deployed on the nation's roads. For instance, in 1932, two gangs of European unemployed men were put to work on the maintenance of old gravel roads so that permanent road workers could concentrate on laying strip roads. By 1934, the last year in which this form of unemployment relief was provided, there were 34 White and 35 Coloured unemployed relief workers within the Roads Department. Generally, however, the department did not encourage the use of White workers because they commanded higher wages than African labourers.<sup>35</sup>

In 1925, the Roads Department was re-organized and strengthened, following the appointment of Stuart Chandler as Chief Road Engineer in that year. By the end of 1926, Chandler had increased the department's capital equipment to a total of 326 scotch carts, 2 262 oxen, 126 mules, 56 rollers, six motor lorries and two concrete mixers. The department had also successfully constructed seven high-level and 25 low-level bridges throughout the country.<sup>36</sup> Until 1929, Chandler built only gravel roads since he was convinced that the volume of the country's road traffic was as yet too low to justify spending large sums for the construction of the more expensive permanent roads. This policy was soon to change, however, as the influx of more and faster motor vehicles in the late 1920s began to cause corrugations on the gravel roads, especially in the dry season.<sup>37</sup>

The problem of road corrugation had not arisen in the earlier period, for, before the 1920s, the number of motor vehicles in the country was very small. The country's first motor car did not arrive until 1902 when Charles Duly became the proud owner of a chain-driven, single cylinder, six-and-a-half-horsepower French Gladiator. Soon afterwards, Duly's friend, Francois Issels, imported the second car to grace the country's roads: a Ford. Thereafter, more cars were imported into the country as the new mode of travel became increasingly popular.

By 1916, the number of cars in the country had increased enough to enable Charles Duly to establish a 'motor corps' of 36 commandeered vehicles [the total number of cars in the country then] to help in the war against the Germans in Tanganyika. By 1922, the number of motor car owners had increased sufficiently to justify the formation of Rhodesia's own Automobile Association (AA) whose membership was reported at 1 000 a year later.<sup>38</sup> Despite this notable increase in the number of cars, the

<sup>35</sup> Southern Rhodesia, *Rep. by the Secretary for Mines and Works, 1926*: 'Roads Department, Repts. of the Chief Road Engineer, 1934, 1935 and 1936', in Southern Rhodesia, *Roads Department, Ann. Rep., 1934-1936*; B. Whyte, 'From wagons to wings', 21.

<sup>36</sup> T. C. Salmon, 'A short history of Rhodesian roads', 850.

<sup>37</sup> Southern Rhodesia, *Chief Road Engineer's Rep., 1930*.

<sup>38</sup> B. Whyte, 'From wagons to wings', 19-21.

motor car was still a novelty in the country by the end of Company rule. There was, therefore, no pressure on the Roads Department to construct more durable but expensive permanent roads.

The situation changed dramatically in the late 1920s as the motor car became more popular and large numbers of cars were brought into the country. The following table documents the increase in the number of cars between 1928 and 1929.

NUMBER OF VEHICLES IN SOUTHERN RHODESIA 1928-1929

| Year                           | Municipalities |       | Elsewhere |       | Total  |        |
|--------------------------------|----------------|-------|-----------|-------|--------|--------|
|                                | 1928           | 1929  | 1928      | 1929  | 1928   | 1929   |
| Motor cars                     | 4 625          | 5 275 | 6 175     | 7 730 | 10 800 | 13 150 |
| Other Vehicles<br>(Iron tyred) | 850            | 725   | 7 450     | 7 200 | 8 300  | 7 925  |

Source: NAZ, S482/477/39, Roads: General, Number of Vehicles in the Colony, Minister of Mines and Public Works to PM, 23rd July 1930.

Commenting on the rapidity with which the new transport technology of the motor car became popular in the country in the late 1920s, R. Hodder-Williams noted that, while in the early 1920s most farmers in Marandellas District used ox-wagons and car owners 'were the exception', by the end of the decade,

the ubiquitous Ford Model-T was becoming more familiar. The newspapers for 1928, for instance, clearly suffered from car mania with a sudden expansion of advertisements, articles, and travel guides extolling the virtues of the internal combustion engine.<sup>39</sup>

Equally struck by the changes taking place in the country, the editor of the *Rhodesia Herald* of May 3, 1929, stated, 'Generally speaking, there has been a very considerable increase in the volume of traffic on all roads, estimated by the Chief Road Engineer at 117 per cent.' In addition to the growing demand for better roads by private motorists, the introduction of the Road Motor Services by the Beira, Mashonaland and Rhodesia Railways and the government in 1927 exerted further pressure on the country's road network.

Many outlying farming and mining areas were not serviced by the railways and were periodically cut off from other centres during periods

<sup>39</sup> R. Hodder-Williams, *White Farmers in Rhodesia 1890-1965: A History of Marandellas District* (London, Macmillan Press, 1983), 155.

The disease epidemics, when draught power became unavailable, during the East Coast Fever outbreak of the late 1920s. To service areas, railway companies, in conjunction with the Rhodesia Government, introduced the Rhodesian Motor Services (RMS) in June 1927. The first service ran from Sinoina to Miami and was served by a Croft A3 Petrol-driven six-wheeled vehicle, with a payload of two half tons; the first three-axled lorry to be used in the country. Because of the poor condition of the roads, the 72-mile trip from Sinoina to Miami took eight hours in the dry season and a staggering 24 hours during the wet season.

Other RMS routes were opened thereafter so that by 1928, RMS covered a total of 1 778 miles, while the service boasted a fleet of 17 lorries of the three-wheeled type, two four-wheeled lorries and four-wheeled trailers. Ten years later, RMS boasted a total of 44 lorries, two passenger coaches and 10 trailers. The RMS transported mainly bulky agricultural commodities from outlying farms to railheads throughout the country. In the 1930s, the RMS played a crucial role in transporting vital construction material for the Birchenough Bridge. As some of the building material for the bridge was imported from Britain and transported by railway to Umtali, RMS provided the necessary transportation link from Umtali to the Birchenough site on the Sabi River.<sup>40</sup>

The growing demand for better and more durable roads forced the Chief Road Engineer to reconsider his earlier views on the adequacy of dirt roads. In 1927, he had argued strongly against construction of concrete or tar-macadamized roads because of the expense they entailed. In a letter to the Secretary for Mines on November 8, 1927, the Chief Road Engineer had written:

The roads will cost about £8 000 a mile and there are 6 000 miles of main roads in the country so the total cost of concreting these will amount to £48 000 000 . . . The other type of road is sprayed tar macadam which costs £2 000 a mile or £12 000 000 for the 6 000 miles . . . It will be seen that both these amounts are far in excess of what a country with a white population of 40 000 can afford or expect . . . To build the type of road being made today, this can be made at a cost of £150 a mile and the maintenance costs about £10 a mile . . . This cost is more in keeping with the financial resources of the Colony.<sup>41</sup>

<sup>40</sup> Southern Rhodesia, *Rep. on Roads for the Year 1928* [Presented to the Legislative Council, 1929] (Salisbury, Govt. Printers, 1929); Beira and Mashonaland and Rhodesia Railways, *The General Manager, 1927-1930* (Bulawayo, Rhodesian Printing and Publishing Co., 1930); 'The trailmakers: The story of Rhodesia railways', *Illustrated Life Rhodesia Supplement* (1973), 47; S. Mushunje, 'Roads and Road Transport', 24.

<sup>41</sup> NAZ, S481/701, PM, Roads General, Chief Road Engineer to Secretary for Mines and Railways, November 8, 1927.

By 1930, however, the Chief Road Engineer was persuaded that permanent roads were more in keeping with the growing demands of the country's traffic than gravel roads. In his words:

Owing to the increased heavier and faster moving traffic, the problem of corrugations and of maintaining the roads in the dry season is becoming greater each year and at no distant date the question of constructing a class of road better than the ordinary gravel road in use will have to be considered.<sup>42</sup>

Soon afterwards, the Chief Road Engineer authorized the construction of an experimental concrete strip road on the Gwelo-Selukwe road. Here, a quarter mile of parallel strips each 2ft wide and separated by 2ft and 9" of compacted gravel were laid at a cost of £400 per mile. The results of the experiment demonstrated clearly that, while strip roads were more expensive to construct than earth roads, they were a far better alternative to the dusty and often corrugated gravel roads then existing in the country.<sup>43</sup>

Satisfied with the results of the experiment, the Chief Road Engineer ordered more concrete strips to be built in the country. It was soon discovered, however, that, though an improvement on the gravel roads, concrete strips had their own drawbacks. Concrete strip roads were costly to build and entailed the use of large numbers of semi-skilled workers requiring very skilled supervision. Furthermore, the life span of the roads was unsatisfactorily short as heavy vehicles tended to destroy the edges of the strips. Users of the roads also complained about the discomfort from driving on shiny concrete roads which gave out an unacceptable glare in strong sunlight. In any case, the process of constructing concrete roads was rather slow.

For these reasons, the Roads Department turned to the use of asphalt in 1933. Earlier experiments with this medium of construction had proved that asphalt was considerably cheaper and easier to lay than concrete. Furthermore, unlike concrete, asphalt paving did not require the use of large amounts of sand and water. Asphalt had other advantages over concrete: it was more flexible and was, therefore, more capable of adjusting to periodic soil movements without cracking, did not require large amounts

<sup>42</sup> Southern Rhodesia, *Chief Engineer's Rep.*, 1930.

<sup>43</sup> NAZ, NA/Gen-P/CHA, Stuart Chandler (Chief Road Engineer), 'Asphalt strips in Southern Rhodesia', in *Improved Highways* (1933), VI, (iv), 108-126 and B. Whyte, 'From wagons to wings', 21.



of skilled labour, did not command high maintenance costs and had the added advantage of being glare free in strong sunlight. Furthermore, asphalt-paved roads had a long life span of about 15 years before they needed re-surfacing.<sup>44</sup>

From 1933 onwards, therefore, the Roads Department's strip-road construction programme went full steam ahead, until by 1936, it was reported that motorists could,

now travel continuously on asphalt paving from near Macheke at one end to south of Balla Balla at the other end, a distance of approximately 415 miles. This is by far the longest stretch of continuous paved surface in the whole of Africa.

By 1938, asphalt strip roads extended in an unbroken line from Umtali through Salisbury, Enkeldoorn, Fort Victoria to Beitbridge and from Umtali to Bulawayo, covering a total distance of 1 182 miles. In 1945 the country boasted a total of 2 211 miles of asphalt strip roads.<sup>45</sup>

In conjunction with strip road laying, the roads department also undertook a vigorous programme to construct both low-level and high-level bridges to minimize the delays occasioned by flooded rivers in the past. More than 266 low-level bridges and 12 high-level bridges were constructed during this period. The three most notable high level bridges constructed at this time were the Alfred Beit Bridge over the Limpopo River (1928), the Birchenough Bridge over the Sabi River (1935) and the Otto Beit Bridge over the Zambezi (1939). The bridge construction programme was funded, partly, by the Beit Trust which had been set up earlier to improve transportation and communication in the country. Of the total number of bridges constructed in the country by 1939, 92 had been funded directly by the Beit Trust while the remainder were paid for through various loan funds.<sup>46</sup>

Between 1923 and World War II, a number of important road laws were enacted. Among the most important of these were the Roads and Road Traffic Act (1925) and the Roads and Road Traffic Act (1936).<sup>47</sup> The Road and Roads Traffic Act of 1925 was limited in its scope as it was

<sup>44</sup> Stuart Chandler, 'Asphalt strips'.

<sup>45</sup> Southern Rhodesia, *Rep. on Roads for the Year 1936* [Presented to the Legislative Council, 1937] (Salisbury, Govt. Printer, 1937); Southern Rhodesia, *Rep. on Roads for the Year 1940* [Presented to the Legislative Council, 1941] (Salisbury, Govt. Printer, 1941). The only significant road work carried out during the war period was the erection of milestones on the Bulawayo-Victoria Falls Road at five-mile intervals.

<sup>46</sup> B. Whyte, 'From wagons to wings', 21; T. C. Salmon, 'A short history of Rhodesian roads', 851.

<sup>47</sup> NAZ, S481/1042, PM, Roads General: Roads and Road Traffic Act, 1925; NAZ, S482/477/39, PM, Transport Department, Roads and Road Traffic Regulations, 1936; Roads and Road Traffic Act, 1936.

designed essentially to enable the government to regulate all traffic on the roads in order to prevent the destruction of roads by improper use. The Roads and Road Traffic Act of 1936 was more comprehensive and was, undoubtedly, the most significant piece of road legislation to be passed in the country before the Second World War.

The 1936 Act was based on a number of recommendations made by a special committee, known as the Road Committee, which was set up by the Cabinet on August 3, 1934 to recommend appropriate legislation to govern road traffic in the country. In its report, submitted to the Prime Minister by its chairman R. L. Hardy in September of the same year, the Committee made a number of recommendations, among which were that the government should:

- a) provide for the creation of a road fund to finance road construction and maintenance;
- b) introduce a compulsory scheme for the control of roads by local bodies;
- c) make laws pertaining to safety and the control of public service vehicles and goods vehicles;
- d) introduce third party risk insurance for all motor car owners; and
- e) enact legislation controlling unfair competition between rail and road services and among road services operators.<sup>48</sup>

The Road Committee's recommendations require comment. The request for the setting up of a road fund arose out of the fact that road maintenance costs were escalating rapidly as the road network expanded and were becoming an increasing burden on the country's coffers. It was felt that some way had to be found to make the road users meet part of the costs. Consequently, the Committee recommended that a road fund, large enough to meet the full cost of all main and district roads, should be set up from annual vehicle and driver's licenses and money obtained from customs duties on motor cars, motor trucks, motor cycles, their spare parts and accessories, tyres and tubes and petrol.

In recommending the introduction of compulsory schemes for local road maintenance, the Road Committee was concerned by the reluctance of many districts to establish road councils ever since the passage of the 1921 Road Councils Ordinance. To ensure that all districts would establish road councils, the Committee recommended that,

<sup>48</sup> NAZ, 5482/477/39, PM, Transport Department. *Rep. of Road Committee Appointed in Terms of Cabinet Resolution No. 3 768 of 3rd August, 1934* [R. L. Hardy — Chairman] submitted to the PM in September 1934 (Hereafter called *The Hardy Rep.*).

of the existing road council system which is based on permissive legislation should be instituted empowering the Governor to establish a road council in any area where it is considered necessary . . . (and) those living in settled areas should take responsibility towards local government and form road councils for the purpose of constructing and maintaining the local road system.

It was felt however, that the government should continue to subsidize road councils on the £ for £ basis as it had done in the past. This recommendation (c) stemmed from the Committee's concern that, despite the increase in the number of public vehicles on the country's roads in the few years, there was currently no legal mechanism enabling the authorities to verify the fitness of public vehicles. As a result, many accidents, which could have been avoided had appropriate legislation been in place, were occurring on the roads.

The call for legislation to curb unfair competition was probably prompted by the railway authorities who were increasingly demanding compensation from what they regarded as crippling and unfair competition from road services.<sup>49</sup> The Committee noted that the rising incidence of competition between rail and road services was caused by the fact that while the railways operated under restrictive regulations and had to pay full charges in connection with the upkeep of their permanent way, road transport was free of any restrictive legislation and did not contribute its fair share towards the construction and maintenance of the road network.

The Committee therefore, recommended the enactment of 'reasonable regulations for the control of public service vehicles and goods vehicles' and the control of road motor services 'through the medium of a board by licenses, . . . minimum tariff rates' and other measures. The Committee felt it necessary to point out, however, that the recommendation was in no way intended to bolster up the railways 'through stringent control of commercial road transport' as 'we hold the view that the public are entitled, within reasonable limits, to the lowest transport rates obtainable'.<sup>50</sup>

All the above recommendations were incorporated in the Roads and Traffic Act of 1936 which provided for regulations governing, *inter-*

<sup>49</sup> NAZ, S482/470/39, PM, Railways: General, Road Motor Transport, Competition with Roadways. This file contains a memorandum from the Rhodesia Railways to G. M. Huggins, dated June 3, 1937 which refers to the existence of the railway authorities' unhappiness with the competition from road motor transport as early as 1933. It is more than likely, therefore, that representations on this issue were made to the Roads Committee and influenced its recommendations pertaining to unfair competition.

<sup>50</sup> *The Hardy Rep.*

- 1) the construction and maintenance of roads;
- 2) the establishment and financing of road councils;
- 3) the registration of motor vehicles and licensing of all vehicles;
- 4) control of public service vehicles;
- 5) the establishment of compulsory insurance against third party risks;
- 6) licensing of drivers of motor vehicles; and
- 7) miscellaneous provisions regarding speed limits, dangerous driving and accidents.<sup>51</sup>

As shown above, the road programme witnessed significant expansion in the post-Company period so that, by the outbreak of the Second World War, there was in place a fairly modern highway system of asphalt strip roads and reasonably usable gravel roads linking major population centres to each other and with the surrounding countryside. This road network serviced an increasing volume of traffic which, according to the Chief Road Engineer's 1938 report, had increased by some 500 per cent since asphalt strips were first constructed a few years earlier. Not only was there more traffic, its speed was also faster by 100 per cent since 1933.<sup>52</sup>

During the war, however, little attention was paid either to road maintenance or road construction as the country's resources were directed to the war effort. As a result, the country's road system deteriorated considerably and was in an unsatisfactory condition by the end of the war. The deterioration had been worsened by the rapid increase in road traffic during the war years. Not only were there more cars in the country than before, but the number of heavy vehicles and the speed of motor vehicles had also increased considerably. Consequently, the strip roads which, before the war, had been hailed as the ultimate solution to Southern Rhodesia's road transport problems, were, by war's end, found to be grossly inadequate. To cope with the new post-war traffic needs, a programme of road construction, using the conventional bituminous mat was started in 1946 as the country entered yet another phase of road construction, improvement and consolidation. This phase, however, lies outside the scope of this study.

#### CONCLUSION

The article has traced the development of Rhodesia's road system from colonization to the Second World War and argued that, until the 1920s, the country had no road system to speak of, mainly because the British South

<sup>51</sup> *Roads and Roads Traffic Act, 1936.*

<sup>52</sup> *Rep. of the Chief Road Engineer, 1938* (Salisbury, Govt. Stationery Office, 1939).

Africa Company devoted most of its financial resources and attention to railway construction and very little to road construction. The expansion of the country's road system began in earnest after Rhodesia gained responsible government status in 1923 when the demand for better roads, arising out of the increased number of motor cars in the country, led to the introduction of asphalt strip roads which revolutionized the country's road system and laid the foundations for future road development.

No effort has been made in the article to assess the impact of road development on the country's economy since such a complex and controversial subject deserves greater attention and deeper analysis than could be accorded to it in a paper of this size and focus. The need for analyses of the impact of road, rail and air transport on Zimbabwe's economic development cannot be overstressed, for without such studies, any statements concerning the importance of transport in the country's development can only be tentative educated guesses. It is hoped that this study will stimulate interest in studies of the impact of transportation over time, for only then can we understand to what extent transportation helped shape the trajectory of Zimbabwe's development.