

“Riding Two Horses”: The British Aviation Industry’s Position vis-à-vis Boeing and Airbus Industrie

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ABSTRACT

Boeing began to focus on Britain in 1977, and wanted to attract it away from the European consortium Airbus Industrie. Boeing’s grand design was that British aviation companies (British Aerospace [BAe], Rolls-Royce, and British Airways) would participate in the Boeing 757 project. However, BAe rejected the Boeing offer and preferred to join the European Airbus Industrie. Following negotiations, BAe rejoined the European consortium Airbus Industrie, British Airways purchased the 757, and Rolls-Royce became the launch supplier for the 757, which featured its RB211–535 engine. This engine became the best-selling engine Trent. The British aircraft industry was thus finally able to “ride two horses”—namely, the United States and continental Europe.

Keywords: aircraft industry, Rolls-Royce, international collaboration

JEL Classifications: N840, N820, N740

1 Introduction

Following the decline of British industry in the post-war years, growth again became apparent in the 1980s, not only in the financial but also in the manufacturing sector. Many scholars explain this in terms of a shift “from Empire to Europe” (Owen, 1999, pp. 460–461). This view is problematic, however, when one considers the British position in terms of trade with continental Europe and the United States. The most pressing trade issues between Europe and the United States in the 1980s involved the civil airliner sector. This study examines the British government’s aviation industry strategy (e.g., airframes, aero-engines, and airlines) in relation to continental Europe and the United States on the eve of frictions in the civil airliner industry in the 1980s.

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Was the revitalization of the British aviation industry achieved through European cooperation or British–US collaboration?¹ In 1978, Britain’s Callaghan Cabinet pursued both courses. Airframe manufacturer British Aerospace (BAe) had hoped to cooperate with European partners. However, aero-engine manufacturer Rolls-Royce and British Airways preferred to continue to work with the US aircraft manufacturer Boeing. Given its desire to take a course that would benefit and revitalize Britain’s aviation industry, how did the Callaghan government successfully resolve this US–European dilemma?

Since the 1980s, Airbus Industrie has emerged in the airliner market as the main competitor of Boeing, the dominant airframe manufacturer in the 1950s, 1960s, and 1970s. Airbus Industrie’s rising position and the fierce competition between it and Boeing inspired business writers such as Matthew Lynn (1996), Stephan Aris (2002), and John Newhouse (1982, 2008) to describe the competition in the civil airliner business as a case of “Europe versus Boeing,” bypassing the interests of other aero-engine manufacturers, such as Pratt & Whitney (P&W) and General Electric (GE) in the United States, and Britain’s Rolls-Royce. This study examines the survival strategy of the British aviation industry, as devised by British Prime Minister James Callaghan’s Cabinet in the wake of the Airbus Industrie–Boeing rivalry; it does so while focusing on British aero-engine manufacturer Rolls-Royce.

2 Background

As background information, Britain’s involvement in Airbus Industrie should be studied as one of a series of proposals related to Britain’s integration into Europe, alongside the European Coal and Steel Community, the European Economic Community (EEC), and the European Atomic Energy Community. The British position was complicated, as Britain was hopeful that the Rolls-Royce engine would eventually power US airliners. When the European Airbus Industrie was established in 1967, Britain was France’s main partner; however, the British government’s consistent vital interest was in maintaining the position of Rolls-Royce as a leading aero-engine manufacturer that could compete on equal terms with P&W and GE. Before Rolls-Royce secured the US Lockheed TriStar order, the British government’s main concern was supporting the European Airbus Industrie, with which the Rolls-Royce RB207 aero-engine would supposedly be fitted. However, after Rolls-Royce secured the TriStar order in March 1968, the Wilson Labor government lost its passion for the European Airbus Industrie. Then, after France scaled down the airbus to be powered by the US engine, the British government withdrew from the European Airbus

¹I am grateful to David Edgerton and Frances Lynch for their helpful suggestions on an early version of this paper.

Industrie consortium. Throughout the 1970s, the European Airbus Industrie suffered from dismal sales, but in the late 1970s, Eastern Airlines in the United States purchased A300s and became a Boeing competitor (Newhouse, 1982; Lynn, 1996; Lynch and Johnman, 2006). In 1977, Boeing planned to develop the narrow-body (i.e., one-aisle) 757 and the wide-body (i.e., two-aisle) 767. Investment in the dual 757/767 program absorbed all the assets of the Boeing Company, while Airbus Industrie attempted to produce the A310 quickly as a competitor of the 767. In response, Boeing focused on Britain; the company's grand plan was that BAe would play the role of a subcontractor responsible for the wings of the 757, Rolls-Royce would power the aircraft with its newly developed RB211-535, and British Airways would be the launch customer. British participation in the 757 project would thereby hedge business risk and prevent British membership in Airbus Industrie.

As Matthew Lynn aptly says, "[t]he key [...] was the British," because British reintegration into Airbus Industrie (following its departure in 1969) would not only bring the Boeing 757 plan to naught, but also make the European consortium more powerful (1996, p. 147). The battle between the United States and continental Europe focused primarily on which side British airframe builders and engine builders would choose to align themselves. Thus, the nationalization of BAe,² Rolls-Royce, and British Airways³ was important to the future of international politics and industrial development in this sector, although these companies were unaware of the power they held at the time.⁴ Although Rolls-Royce gave priority to powering Boeing's new-generation airliner, BAe favored equal partnership with European aircraft manufacturers over a role as a subcontractor for Boeing.

To resolve the dilemma, the Callaghan government allowed Rolls-Royce and British Airways to go to Boeing, and BAe to partner with Airbus Industrie. The British Cabinet recognized Rolls-Royce's priorities and felt that re-entry to Airbus Industrie would not imply the establishment of an alternative European bloc in a world market that was by then dominated by US manufacturers; rather, it felt that European manufacturers would be in a better position to negotiate effective future collaboration with their US counterparts. Thus, the Callaghan government's commitment to Airbus Industrie was not wholehearted; rather, it was temporary.⁵ As Alan Milward points out, the motivation for Britain's decision to apply for EEC membership in the summer of 1961 had

²On April 29, 1977, BAC and Hawker Siddeley were merged and nationalized to become BAe.

³In 1971, BOAC and BEA merged into British Airways.

⁴BAe was nationalized in 1977 because of financial problems, and British Airways was created in 1972 from the merging of the nationalized British Overseas Airways Corporation and British European Airways.

⁵GEN130 (78) 6th Meeting, August 30, 1978, CAB130/1041, The National Archives, Kew (hereafter TNA).

not been “Nor was it ‘a decision for Europe’ in the sense in which that phrase has since been used. The goal was membership in order to retain the level of influence in Washington which exclusion from the common market threatened to reduce” (Milward, 2002, pp. 310–311).

Frances Lynch and Lewis Johnman (2006) focus on the British factor, especially with regard to Rolls-Royce, in examining the establishment of Airbus Industrie; they conclude that the reason the British government withdrew from Airbus Industrie in April 1969 was the lack of a guarantee by Airbus Industrie to power its A300B with Rolls-Royce rather than US engines. Following its bankruptcy and revival in 1971, the nationalized Rolls-Royce (1971) Ltd. regained competitiveness by developing the RB211–534 engine for the Boeing 747 and the long-range Lockheed TriStar. In the late 1970s, airframe and aero-engine manufacturers began thinking of the next-generation medium-range airliners and aero-engines.

Geoffrey Owen, author of *From Empire to Europe: The Decline and Revival of British Industry Since the Second World War*, devotes an entire chapter to the aircraft industry. On the basis of case studies from a number of different industries, he argues that the British road to recovery was generally achieved by shifting from colonial markets to European ones. Owen points out that the post-war British aircraft industry was the most successful industry in terms of trade, and he refers to Rolls-Royce’s contract with the United States as a successful strategy. However, he categorizes the aircraft industry as a successful case chiefly in terms of Britain’s access to other European markets and industries (Owen, 1999).

The second key issue examined in detail in the current study is how Rolls-Royce remained competitive in international markets as one of the “Big Three,” alongside US companies P&W and GE, even as Britain’s airframe industry overall lost out to that in the United States. If one views the relations between the US and British aircraft industries from the end of World War II until the 1960s as a victory for the United States and a defeat for Britain, it is difficult to fathom the continued high level of technological and sales capability among British manufacturers in the market since the 1970s for military and commercial aircraft engines, particularly those of Rolls-Royce. Although the United States had a decisive lead over Britain in the manufacture of airframes, Rolls-Royce continued to hold its own as one of the “Big Three” aero-engine manufacturers throughout the 1970s and 1980s.

3 Next-generation Airliner Kindles Competition between Airbus Industrie and Boeing

In the late 1970s, airframe manufacturer Airbus Industrie emerged as a symbol of European technological collaboration. It was at the forefront of companies

that could stand toe-to-toe with the era's leading airframe makers, most of whom were based in the United States. As the two poles of aerospace technology emerged, BAe found itself caught in the middle. BAe had been working with continental European airframe makers since the 1960s, although the British aero-engine manufacturer Rolls-Royce still made powerful engines that were global contenders.

Meanwhile, the Callaghan government aimed for British industrial revival through collaboration with the United States. The Cabinet's Ministerial Committee on the Aircraft Industry gave priority to the Rolls-Royce–British Airways preference for the Boeing plan. Rolls-Royce had great hopes of powering Boeing's new 757 airliner. British Airways had already decided that its new equipment plan was to purchase wide-bodied aircraft, to renew its short-haul fleet. Accordingly, British Airways' natural choice was not the 767 or A310, but the 757 (Lynn, 1996). The British aircraft industry was thus compelled to join the global market led by the United States, and it found its entry as an aero-engine supplier.

This study argues that the course of Britain's manufacturing rehabilitation was not "from Empire to Europe," as claimed by Geoffrey Owen, but rather that it was generated by participation in a United States-led globalization trend. Furthermore, the current study proposes that even in the sphere of manufacturing—especially with regards to the defense industry—a shift towards globalization can be seen. Finally, this study calls into question the common belief that Britain had been in decline since the 19th century; it shows that Britain had begun to participate in US hegemony in order to maintain its share of the global market, thus allowing the British aircraft industry to rehabilitate itself.

How, despite the British aircraft industry's loss of competitiveness in the airframe sector, did aero-engine manufacturer Rolls-Royce continue to hold its own as one of the "Big Three" aero-engine manufacturers throughout the 1980s and 1990s, alongside US manufacturers P&W and GE? Solely in the context of the relationship between the US and British aircraft industries, it would be difficult to pinpoint an answer, because the United States had a decisive lead over Britain in manufacturing airframes. The vitality of Rolls-Royce, in fact, raises another important question: How have Britain's engine manufacturers remained competitive in international markets over the long term, while Britain's aircraft industry as a whole fell behind that of the United States? In arguing that Britain went "from Empire to Europe," Owen analyzes many industries, from shipbuilding to automaking, and he insists that British manufacturing was rehabilitated by market shifts, including those in the aircraft industry.

From the 1950s to the 1970s, Boeing dominated 60% of the world airliner market with its family of airliners, from the small 727 and 737 to the medium 707 and, of course, the jumbo 747. However, US Eastern Airlines' order for Airbus Industrie's A300B in 1977 changed this situation. In the late 1970s,

Airbus Industrie⁶ emerged as a strong competitor at a time when airlines wanted planes that were more fuel-efficient, as successors to the best-selling 727s and 737s.

The following section outlines European and US airframe manufacturers' corporate strategies in the 1980s, while examining three British aviation companies: BAe, Rolls-Royce, and British Airways. This summary will be followed by an analysis of the British Secretary of State for Industry Eric Varley's note on aerospace policy and an explanation of Prime Minister Callaghan's negotiations with Boeing, McDonnell Douglas, and Eastern Airlines in Washington, DC in June 1978. British Airways' purchase of the 757s with Rolls-Royce 535 engines will also be assessed. Finally, this study examines the process of BAe's re-entry into Airbus Industrie.

4 The British survival strategy in the civil airliner business

Although it produced in the 1950s the first generation of jet airliners—namely, the British de Havilland Comet—Vickers Viscount was dominated by the Boeing 707 and McDonnell Douglas DC-8 in the long-haul airliner market. In the second generation of jet airliners, in the 1960s, the Boeing 727/737 and McDonnell Douglas DC-9 dominated the short to medium-range market, whereas the British Trident and BAC1–11 failed to acquire significant market shares. In the third generation of airliners, in the 1970s, Boeing launched a wide-body (i.e., two-aisle) 747 jumbo jet powered by a P&W engine, while McDonnell Douglas launched a wide-body DC-10 powered by the GE engine. At the same time, Lockheed launched the wide-body Tristar, powered by the British Rolls-Royce RB211–22 engine, and the French–German Airbus Industrie launched the A300B, powered by the US GE engine.

In the late 1970s, major aircraft manufacturers sought to promote fuel-efficient short to medium-range airliners as successors to the 727/737/DC-9. The four contenders were Boeing's 757 and 767, Airbus Industrie's A310, and McDonnell Douglas's ATMR (i.e., "advanced technology medium range"). Boeing eventually emerged as the leader, with its primary competitor being Airbus Industrie's A310, whereas McDonnell Douglas's ATMR never got off the drawing board. European technical cooperation was a focal point with regard to European integration and industrial strength within the EEC. The aircraft industry was key, as it was crucial to defense as well as the acquisition of foreign currency.

The Boeing plan to develop the narrow-body 757 and the wide-body 767 in the late 1970s was a huge risk, as the investment required for this dual program

⁶This occurred until December 18, 1970, when Airbus Industrie officially became a globally integrated enterprise.

actually exceeded the total corporate assets of the company at the time. Boeing decided first to focus its energy on the battle in the British market between the 757/767 and the A310, with Britain as its target. Boeing's aim was to foster British participation in the 757 project, to hedge business risk and prevent British membership in Airbus Industrie.

Journalist John Newhouse examined the ambiguity of the British position in terms of Rolls-Royce's strategy for dealing with the United States. He found that the "largest single difficulty [of the Airbus Industrie project] lay in Britain, more precisely with Rolls-Royce. This illustrious company mirrored Britain's deep and continuing uncertainty as to whether its larger political and commercial interests lay in Europe or the United States" (Newhouse, 1982, p. 126).

Boeing hoped to bring Britain into the US camp, away from continental Europe, by supporting Rolls-Royce as the launch engine supplier,⁷ British Airways as a launch customer, and BAe as the subcontractor. In other words, Boeing wanted to pull Britain away from Airbus Industrie. As a counter-offer, Airbus Industrie asked BAe to rejoin it as a full partner. According to Newhouse, "[t]he issue was whether Britain would cast its lot with Boeing or Airbus Industrie—with America or Europe, as the government saw it (Newhouse, 1982, p. 200).

The British choice between US Boeing and Europe's Airbus Industrie was important not only for the airliner business, but also because it marked the bounds of a political struggle between the United States and Europe. Britain's Callaghan government accepted Boeing's offer of partnership in the 757, although BAe had reservations, as it preferred not to be a mere design partner and subcontractor; rather, it hoped to join Airbus Industrie. For their part, France and Germany insisted that BAe's re-entry into the Airbus Industrie be contingent on British Airways' purchase of Airbus Industrie's A310, as evidence of the British firm's intention to stand by Airbus Industrie (Aris, 2002).

How did the Callaghan government cope with the diverse requirements of British Airways, BAe, and Rolls-Royce? When BAe's negotiations with Airbus Industrie deadlocked, Britain's Laker Airways purchased Airbus Industrie's A300. France considered Laker Airways' purchase a "British purchase" and reluctantly approved BAe's re-entry to Airbus Industrie. As a result, British Airways became the launch customer of the 757, and Rolls-Royce became the launch supplier of the newly developed Boeing RB211-535 airliner. The company thus became a supplier to US manufacturers and of Airbus Industrie airframes, throughout the 1980s and 1990s.

⁷Becoming the launch engine supplier was a huge benefit to aero-engine manufacturers, as it guaranteed a monopoly in early stages of the selling of airliners before airframe manufacturers developed nacelle joining airframes and aero-engines. As mentioned, the British withdrawal from the European Airbus Industrie in 1969 was caused by the lack of a guarantee that the Rolls-Royce engine would power the European Airbus Industrie's A300B. See Lynch and Johnman (2006).

5 Strategies of airframe manufacturers in fourth-generation jet airliners

The Boeing proposal to BAe was for the British firm to build major parts of the 757, including the wing, engine, and nacelles, all of which would constitute a new structure; these components would amount to more than 50% of the aircraft. An order from British Airways would suffice in kicking-starting the program. Boeing Commercial Airplane Co. President E. H. Boullioun said that the emergence of a second customer would make it a certainty, observing that “Eastern Airlines recently signed an agreement under which both companies would explore the potential of a 757-type aircraft.”⁸

6 The British response to the Boeing 757 offer

Faced with the Boeing offer, the three major British companies reacted in different ways. For Rolls-Royce, Boeing’s request to supply engines satisfied a long-standing hope, because although Rolls-Royce powered the Lockheed TriStar wide-bodied airliner in the early 1970s, this product had not been successful in the market. Sir Kenneth Keith, chairman of Rolls-Royce, hoped to power the Boeing airframe. His first attempt was in 1974, when the Boeing 747 was powered with Rolls-Royce’s RB211–524, a higher-thrust version of the RB211 that was launched in 1974 to meet Lockheed’s requirements for a 48,000-pound-thrust engine that would improve the range and payload of the Tristar. In 1974, approval was given for a 50,000-pound-thrust version for the Boeing 747; this allowed Rolls-Royce to capture a wider market, initially through British Airways. The 524 was in service with 26 aircraft, and serving five airlines; Rolls-Royce received orders to supply a further 73 aircraft for 13 airlines, with options on an additional 54 of them. PanAm’s purchase of 12 524-powered Tristar-500s (the long-range version), and Qantas’s decision to buy the 524D4-powered Boeing 747 after a longstanding commitment to P&W represented major breakthroughs.⁹

Despite Rolls-Royce’s hopes and the fact that the offer would bring approximately 20% of the work to the proposed 757, BAe was cool to Boeing’s offer. This is because the initial Boeing proposal “would have involved British Aerospace in little more than the manufacture of the wing box, with no participation in the management of the project,” and Boeing would retain control of the design and program management. BAe officials explained that “we have an agreement, taken in good faith, that we will first explore with our European partners the

⁸“New Aircraft Decision Nearing,” *Aviation Week & Space Technology* (hereafter *AWST*), April 24, 1978, p. 28.

⁹Rolls-Royce, Presentation to Prime Minister, October 16, 1979, CAB 130/1123, TNA.

possibility of building in collaboration with them a European aircraft in the range of 150–160 seats and we are going to honour this agreement.”¹⁰

Callaghan seriously considered the British aircraft industry's position and held a series of ministerial meetings on aircraft policy from April 1978 to October 1978. He explained the diverse intentions of the three national companies on April 26, 1978, saying that even though Rolls-Royce had hoped for collaboration with Boeing, and British Airways wanted to buy the Boeing 757, BAe was unclear as to whether its future was with the United States or with Europe, even as he preferred for the moment collaboration with Europe.¹¹

At a meeting on May 16, 1978, British ministers found the Boeing offer attractive, and they envisioned a future where Rolls-Royce had major customers (e.g., the United States) and entrance to the RB211 family market. Although Boeing did not guarantee that the 535 engine would be the lead engine, Rolls-Royce had an 18-month lead on its competitors, P&W and GE. In ministerial discussions in May 1978, it was argued that the Boeing plan would be highly desirable from BAe's point of view, because it offered BAe the opportunity to collaborate with Boeing's uniquely successful market organization, which held a 60% share of the civil airliner market. The ministers thought the Boeing plan for the 757 program could open for BAe the prospects of further collaboration over the long term.¹²

Rolls-Royce appealed to the British Parliament for the Boeing offer, while focusing on the company's position with respect to its forthcoming choice. Rolls-Royce, by now firmly in favor of Boeing, also called to join the 757 program; however, the proposal, as far as BAe was concerned, was still not advantageous, and it noted two other reasons for rejecting it. First, it would put all of BAe's future programs into one alliance. As a result, BAe would be dependent on how Boeing could provide airliners. What if these thousands of orders did not materialize? Second, there would be nothing to prevent Boeing from slowing down or even halting development of the 757 in order to accelerate the development of other projects, if they appeared to be more promising.¹³

The best response for Rolls-Royce to the Boeing offer and French–German Airbus Industrie was made on June 13, 1978, at a high-level meeting attended by Callaghan; Eric Varley, the Secretary of State for Industry; Sir Kenneth Berrill, head of the Central Policy Review Staff (CPRS¹⁴); and Sir Kenneth Keith, chairman of Rolls-Royce. Callaghan pointed out that the interests of BAe, British Airways, and Rolls-Royce were diverse. Keith noted the advantages

¹⁰“Boeing Seeks 757 Collaboration: British Aerospace Cool to Offer,” *AWST*, April 24, 1978, p. 29.

¹¹GEN130 (78) 1st Meeting, April 26, 1978, CAB130/1041, TNA.

¹²GEN130 (78) 2nd Meeting, May 17, 1978, CAB130/1041, TNA.

¹³“Rolls-Royce Urges Boeing Collaboration,” *AWST*, May 29, 1978, p. 31.

¹⁴CPRS was an independent think-tank within the Cabinet office and under the control of the prime minister; it planned long-term economic and political strategies.

inherent in Boeing's offer to Rolls-Royce, but said the problem was with BAe: he doubted that BAe's productivity could match that of Boeing or McDonnell Douglas, and the risk was that if Britain were to delay any further, Rolls-Royce would lose the opportunity to supply the launch engine for the 757.¹⁵

The meeting attendees also discussed various European aspects: Callaghan referred again to the view of French President Giscard d'Estaing and German Chancellor Schmidt—namely, that there had to be a European aircraft industry—and expressed his desire for a solution satisfactory to all three corporations. Callaghan said Giscard and Schmidt would not want the US aircraft industry to dominate worldwide, and they would be prepared to subsidize their domestic industries in order to compete. Keith pointed out that Rolls-Royce could not survive if it were forced to rely solely on the relatively small European market, stating that Rolls-Royce was too large for that to be feasible.¹⁶

In his note on aerospace policy to the Cabinet, Varley recommended approval for the 535 engine project, subject to two launch orders and acceptance of the commercial terms negotiated for entry to Airbus Industrie—acceptance that was, in turn, subject to French–German agreement at the government level to the aforementioned conditions. In his memo, Varley recommended that Rolls-Royce be authorized to proceed with the 535 on the basis of two launch orders (British Airways and US Eastern Airlines); that British Airways be authorized to purchase Boeing 757s; and that BAe examine the possibility of partnership with Boeing, McDonnell Douglas, and Airbus Industrie.¹⁷

From April to mid-June 1978, the Callaghan government debated, anticipating France's demand for British Airways' purchase of Airbus Industrie airliners as a prerequisite for BAe's re-entry to Airbus Industrie. On June 21, 1978, the British ministers discussed the Boeing offer in terms of its effect on BAe, stressing that BAe believed Boeing attached higher priority to the 767 than to the 757, on which it had been offered collaboration. BAe had doubts about the proposed design of the 757 wing it had been offered.¹⁸

In mid-June, the ministers approved Varley's note on aerospace policy and allowed the launch of the Rolls-Royce 535, under the condition of there being two launch customers. At this point, the issue shifted to BAe's collaboration in the deal. It was then that Callaghan decided to go to Washington, DC to negotiate with US manufacturers and Eastern Airlines.

¹⁵Notes from a meeting held in the Prime Minister's study at 10 Downing Street at 10:30 on Tuesday, June 13, 1978, PREM16/1934, TNA.

¹⁶Notes of a meeting held in the Prime Minister's study at 10 Downing Street at 10:30 on Tuesday, June 13, 1978, PREM16/1934, TNA.

¹⁷"Aerospace Policy" (A note by the Secretary of State for Industry), PREM16/1934, TNA.

¹⁸GEN130 (78) 3rd Meeting, June 21, 1978, CAB130/1041, TNA.

7 Callaghan's visit to the United States

Callaghan held discussions in the United States with Frank Borman, Eastern Airlines president; T. A. Wilson, chairman of Boeing Co.; and Sanford McDonnell, president of McDonnell Douglas.¹⁹ Boeing seemed the most promising option as a BAe partner, but there was a gap of £250 million between BAe's and Boeing's estimated costs for the supply of 400 wing sets for the 757. BAe continued to be bothered by the fact that its involvement was only as a subcontractor, with no design element. McDonnell Douglas was not prepared to go as far as a 50:50 share in collaboration with BAe on its proposed ATMR aircraft, and so BAe sought to join Airbus Industrie on its B2/B4 and B10 (A310) projects. This meant renegotiating a profitable contract for constructing the B2/B4 wing. In addition, collaboration with the French and the Germans on civil aircraft would significantly improve the prospect of future BAe work on military projects.²⁰ As Callaghan visited the United States, France pressured Britain, with French Transport Minister Joel le Theule announcing that "British Airways would have to buy the Airbus if European negotiations were to succeed" (Newhouse, 1982, p. 208).

On July 4, 1978, Callaghan explained the stance of US airframe manufacturers and airliners with regard to fourth-generation planes: if BAe collaborated on the 757, the ATMR would not be built. Borman of Eastern Airlines said he was prepared to offer a firm and immediate commitment, stating that his airline would purchase the 757 with the RB211-535 engine. Boeing indicated that it would not need two orders for the 757 to proceed: a British Airways order alone would suffice, as Boeing was confident that the 757 would be bought by several US airlines in the future. Both Eastern Airlines and McDonnell Douglas believed that Boeing was giving higher priority to the 767 than the 757, and Boeing said nothing to contradict this view. British participation in the 757 would, in Boeing's view, greatly enhance the long-term possibility of extending industrial collaboration with BAe.²¹

The view of CPRS was that the interests of Rolls-Royce and British Airways were clear, and that it needed an early and positive agreement for the 757 purchase and the 535 launch. CPRS produced a note on aircraft policy for the ministerial group on July 28, 1978. Time was running short; Rolls-Royce needed a decision soon. The danger was that its other launch customer, Eastern Airlines, might shift its preference from Rolls-Royce to GE, which would instead provide the launch engine. Decisions concerning BAe were more complicated, however, and following Varley's visit to Paris and Bonn, BAe entered into commercial negotiations with Airbus Industrie on the basis that he would wish to join as

¹⁹"British Concern," *AWST*, July 3, 1978, p. 13.

²⁰CM (78) 29th Conclusions, August 2, 1978, CAB128/64/9, TNA.

²¹GEN130 (78) 4th Meeting, July 4, 1978, CAB130/1041, TNA.

a full risk-sharing partner in the B2, B4, and B10 (later named A310) Airbus Industrie family. However, it was said that French President Giscard d'Estaing wanted some kind of commitment—namely, that if BAe were to join Airbus Industrie, then British Airways would buy the B10. As for negotiations with Boeing with regard to BAe's building of 20–25% of the 757 on a subcontractor basis, BAe was not interested, unless it had control over the design elements.²²

Ministers gave priority to Rolls-Royce in an August 1, 1978 meeting, where they further discussed BAe's re-entry to Airbus Industrie. Varley outlined five conditions in the negotiations between BAe and Airbus Industrie, the fifth of which was problematic. BAe wanted a 20% stake in Airbus Industrie, a right of veto for BAe in future Airbus Industrie projects, a compromise over a B2/B4 wingbox subcontract that would allow BAe to maintain its present prices until the 150th set had been delivered, and an agreement that BAe would make no contributions to past development costs or losses. Finally, and problematically, BAe wanted to pursue a deal that would secure the sale of the A310 to British Airways.

The problem was whether to join Airbus Industrie, or do nothing ahead of the Callaghan administration's decision regarding airframe collaboration. In this decision, however, the position of Rolls-Royce had to be taken into account, as it was as important to Britain as to BAe—if not more so. The position of British Airways was also difficult, and its board of directors now formally sought government approval of an order for 19 Boeing 757s. Together with the order for 21 757s that Eastern Airlines had promised, this would suffice in launching the 757. Both these launch orders would be for the 757 with a Rolls-Royce RB211–535 engine, giving Rolls-Royce a significant lead in developing such an engine over its US competitors. It would be the first time in many years that Rolls-Royce held such a market advantage. The British Airways order was therefore crucial. The government could not make a decision that would effectively deprive the manufacturer of sound sales prospects in the United States, and an announcement that British Airways would order 10 757s would seriously prejudice the possibility of its re-entry to Airbus Industrie, because such a move would be seen as conflicting with the entry condition of purchasing the A10. If the government were to separate the decisions and announce either the British Airways' 757 order and approval for the RB211–535, or BAe's re-entry to Airbus Industrie, but not both, there would be severe political penalties.

Decisions were clearly becoming urgent in all aspects, but it was crucial that any decision on the 757 and the RB211–535 not prejudice negotiations with Airbus Industrie—and, conversely, that any decision on entry into Airbus Industrie should not undermine RB211–535 prospects. Most importantly, the French should not be given the opportunity to blame Britain for any failure in

²²GEN130 (78) 13, "Decisions on Aircraft Policy, Note by the Central Policy Review Staff," July 28, 1978, CAB130/1041, TNA.

the negotiations, and Britain should not give the impression, particularly to the Germans, that it was "playing a double game."²³

On August 2, 1978, Varley emphasized that his first priority would be to secure the future of Rolls-Royce, and noting that selling the 535 medium-thrust version of Rolls-Royce's RB211 was urgent. Rolls-Royce had a good chance of making money if its product became the launch engine for the Boeing 757. British Airways considered the Boeing 757 the best airliner for its needs, and therefore sought approval to order 19 of them. Eastern Airlines was also ready to place a launch order for 21 757s with the 535 engine. The problem of BAe remained, however, because it still wanted to collaborate with Airbus Industrie, and the French continued to press for an A310 order from British Airways as a condition of re-entry. The French refused to believe that the British government had no control over British Airways' purchasing policy, which in any case was based on financial forecasts. Moreover, it was unlikely that BAe would succeed in negotiating re-entry into Airbus Industrie if British Airways bought the Boeing 757. Varley wanted to avoid a situation in which Britain would be left with no airframe industry, save for the HS.146 feeder liner; thus, he said that the government should be prepared to tell the French and the Germans that Britain would ensure that British Airways would purchase the B10 on the condition that they provide a genuine role for Rolls-Royce in Europe. Following this meeting, the British government allowed British Airways to purchase the Boeing 757 with the RB211-535 engine, but difficulties with the French remained. Shortly after, Eastern Airlines decided to specify the 535 engine for its purchase of Boeing 757s (Newhouse, 1982).²⁴

8 British Airways' order as "King Charles's Head"

Concerning the demand of French President Giscard d'Estaing that British Airways order European airbuses as a condition of BAe's re-entry to Airbus Industrie, John Newhouse, in *Sporty Game*, compares it to the demand for "King Charles's Head" during the Puritan Revolution (Newhouse, 1982). After the government gave approval for British Airways' purchase of the 757s—and therefore approval to launch the Rolls-Royce 535 engine—BAe's re-entry to Airbus Industrie became the top issue. During a meeting on August 30, 1978, Callaghan pointed out that collaboration with Airbus Industrie should be encouraged, but he added that the partnership did not "mean establishment [of] an alternative European bloc in a world market at present dominated by

²³GEN130 (78) 5th Meeting, August 1, 1978, CAB130/1041, TNA.

²⁴CM (78) 29th Conclusions, August 2, 1978, CAB128/64/9, TNA; Sir Kenneth Keith to James Callaghan, September 1, 1978, PREM16/1934, TNA; James Callaghan to Sir Kenneth Keith, September 11, 1978, PREM16/1934, TNA.

American manufacturers in order to negotiate effectively future collaboration with their United States counterpart.”²⁵ Callaghan said that despite the inevitable uncertainties, a majority of the group accepted the broader case for a strong European civil airframe industry and for BAe’s full membership in Airbus Industrie. On this basis, the ministerial group was prepared to endorse the terms of the industrial agreement initiated by BAe and the existing partners of Airbus Industrie for BAe’s status as a full risk-sharing member.²⁶

BAe’s re-entry to Airbus Industrie was agreed, in principle, by its industrial partners, but the move was stalled by the French government’s insistence that British Airways purchase Airbus Industrie’s A310. To this end, Varley rejected the French demand for a letter of intent from British Airways during negotiations with the French Transport Minister Joel le Theule.²⁷

At this point, it was Sir Freddie Laker, chairman of Laker Airways, who broke the deadlock. Newhouse notes that

[h]elp from an unexpected source appeared as Sir Freddie Laker, by coincidence, ordered Airbus during this tense period, an event which offered the impression of a “British buy”, even though Laker Airways is a private company. And the French were told that should British Airways ever want an Airbus (most unlikely), the government would expect it to buy the A-310. (Newhouse, 1982, p. 210)

Although the move coincided with BAe’s efforts to re-enter the Airbus Industrie consortium, hope was expressed that such a sale might ease French objections to British re-entry in the absence of an order for Airbus Industrie aircraft from British Airways.²⁸

The French and German governments reluctantly accepted Laker’s purchase as a ticket for BAe’s re-entry to Airbus Industrie. In mid-September, Laker Airways placed an order for five McDonnell Douglas DC-10-30s and 10 Airbus Industrie A300Bs.²⁹ Laker’s order for the A300 gave the impression of a “British purchase,” even though Laker Airways was a private company. Callaghan wrote letters to d’Estaing and Schmidt, and on October 16 told his ministers that although the French still wanted British Airways’ order, they would not insist upon it (Newhouse, 1982).

Varley told the ministers on October 16, 1978 that the French government was still nominally seeking an order from British Airways for Airbus Industrie planes. Although France was no longer pressing this purchase as an essential condition of entry, the British presumed they could expect the French to create

²⁵ GEN130 (78) 6th Meeting, August 30, 1978, CAB130/1041, TNA.

²⁶ GEN130 (78) 6th Meeting, August 30, 1978, CAB130/1041, TNA.

²⁷ “British Airbus Re-entry Stalled by French,” *AWST*, September 4, 1978, p. 20.

²⁸ “Laker Airbus,” *AWST*, September 11, 1978, p. 16.

²⁹ “Laker Signs Order for A300,” *AWST*, September 25, 1978, p. 20.

political capital from the issue if negotiations were to break off. All indications were that French officials and industrialists were anxious to conclude an agreement, with the obstacle being the French president. Notwithstanding the attitude of the government, the president was convinced that Airbus Industrie needed BAe, not only because it would share financial risk but also because of its technical contribution.³⁰

Approval was given in August 1978 for the full launch of the 535 engine, albeit only after the National Enterprise Board (NEB)³¹ and the British government had carefully assessed the technical and commercial prospects, given the problems encountered in the development of the 524. The economic case for the 535 rested largely on the commitment of Boeing to use the 535 as a certified machine for the first Boeing 757, which was supported by initial orders for 40 aircraft from British Airways and Eastern Airlines. The derivative engine from GE, the CF-32, was also set to be certified, but some 8–12 months behind Rolls-Royce. The third possible competitor, P&W, appeared unlikely to compete. The 535 was due to be certified in the spring of 1981, and on that basis, Rolls-Royce assumed that the 535 could fulfill over 40% of Boeing's 757 sales, which were estimated at between 1,000 and 1,500 over the following 15 years.³²

After the Laker Airways purchase was recognized as a "British purchase"—thus allowing BAe's re-entry to Airbus Industrie—British Airways became the launch customer of the 757, and Rolls-Royce the supplier with its RB211–535. As Peter Pugh points out, "The 757 would be the first Boeing aircraft to be launched with anything other than a Pratt & Whitney engine" (2001, p. 265). Although the Boeing 757, with its Rolls-Royce RB211–535 engine, did not go on to become a commercial success, it and the Boeing 747—the latter of which featured the Rolls-Royce RB211–524—were succeeded by the best-selling Boeing 777, which featured the Rolls-Royce Trent (a variant of the RB211–535). The information displayed with the Rolls-Royce Trent 800 exhibited at the Imperial War Museum in Duxford describes it as "a high-bypass turbofan aero-engine. It was developed to power the Boeing 777 series of aircraft. It is an extremely reliable engine and has achieved significant commercial success. Since 1997, over eighty percent of 777 aircraft have been fitted with the Trent 800 aero-engines."³³ Rolls-Royce's strategy in 1978 to power US Boeing airliners with the RB211–535 had a considerable impact on the company's commercial success as it went into the 21st century, for the engine was soon powering both US airplanes and Airbus Industrie airframes throughout the 1980s and 1990s.

³⁰ GEN130 (78) 7th Meeting, October 16, 1978, CAB130/1041, TNA.

³¹ The NEB's primary role was to provide funds for industrial investment and for the nationalization of firms in some industrial sectors.

³² Rolls-Royce, Presentation to Prime Minister, October 16, 1979, CAB130/1123, TNA.

³³ As for the Trent family, see Pugh (2003), Chapter 6: The Trent Family.

From the late 1970s, with the expansion of the market for jet aircraft and US industry dominance, British–US airframe and engine production collaboration was in full swing. The most important element of this production collaboration was the market expansion strategy of both the United States airframe and British aircraft engine sectors. For the United States airframe sector, production collaboration with the British had two merits. First, the US airframe sector sold aircraft to British Airways, as well as to other airlines that were customers of British aircraft engine manufacturers. Second, by collaborating with British aircraft engine manufacturers, the United States prevented a French–German–British partnership, thereby eliminating its European competitors. Moreover, powering US airframes was of vital interest to British aircraft engine manufacturers, because they had been obliged to power only British aircraft, and this became an obstacle to growth. To gain access to the world market, British aircraft engine manufacturers had to power the US airframe.

9 Conclusion

The rise of Airbus Industrie in the late 1970s naturally created a favorable negotiating environment for Britain's Callaghan government in bargaining with Boeing to power the new-generation Boeing airliner with a Rolls-Royce engine. In addition, the Callaghan Cabinet did not consider BAe's re-entry to the Airbus Industrie consortium as constituting a "European bloc" against US projects, but rather as leverage in strengthening its negotiating position for future collaboration with its US counterparts. In this sense, the Callaghan Cabinet "rode two horses."

Three British national aviation companies—namely, British Airways, Rolls-Royce, and BAe—were divided into two camps. To pull Britain away from Airbus Industrie, Boeing hoped to persuade BAe to play the role of subcontractor for the 757 airliner, while Rolls-Royce would power the 757 and British Airways would become its launch customer. However, BAe preferred to join Airbus Industrie; France and Germany insisted that BAe's re-entry to Airbus Industrie be contingent on British Airways' purchase of Airbus Industrie's A310. As a result of negotiations, Rolls-Royce became the supplier for the 757 with its RB211–535, and BAe re-entered Airbus Industrie. British Airways became the launch customer for the Boeing 757 with Eastern Airlines. The Trent engine (a variation of the 535) has been a best-selling aero-engine since the 1980s. Whereas BAe became a partner in Airbus Industrie, France and Germany held the initiative on the development and production allocations of new airbuses, including French manufacturer-dominated cockpit production. From the 1980s, Airbus Industrie and Boeing have been in competition in the airliner market for short to long-haul aircraft, but British aviation companies have managed to survive, thanks to the Callaghan Cabinet's strategy of "riding two horses."

In the civil aviation sector, Britain withdrew from the Airbus Industrie project and attempted to obtain a share in the global market through British-US collaboration on airframe engine production. In other words, there were certain economic motivations inherent in keeping some distance from the Airbus Industrie project. According to Owen, British industry changed from being an empire-market oriented to European-market oriented, but analysis of the British aviation industry indicates that the rehabilitation of the British aircraft industry in the post-war period arose mainly through its entry to a global market dominated by the United States, as well as through cooperation with Europeans as an alternative.

The struggle between Europe's Airbus Industrie and Boeing in 1978 was preliminary to skirmishes between the two companies that would last throughout the 1980s, when Airbus Industrie would become a powerful challenger to Boeing in the world airliner market—partly with the assistance of European government subsidies. Future research will explore these struggles between Airbus Industrie and Boeing, as well as the position of the British aviation industry in these struggles.

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