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# The Channel Tunnel—an ex post economic evaluation

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#### Abstract

The forecasts underpinning the construction of the Channel Tunnel largely and systematically overestimated the total size and growth of the cross-Channel passenger and freight markets. The share of the cross-Channel markets captured by the Tunnel was accurately predicted. However, this was only achieved through a competitive battle with ferry operators, which resulted in reduced tariffs. The combination of these two factors resulted in revenues much lower than predicted. For completely separate reasons, the construction costs of the Tunnel doubled.

The cost benefit appraisal of the Channel Tunnel reveals that overall the British economy would have been better off had the Tunnel never been constructed, as the total resource cost outweighs the benefits generated. Users have gained significantly at the expense of owners (producers). The latter—both ferry operators and the Tunnel operator have incurred substantial losses. The single biggest component of user's gain has not, as originally expected, been in terms of travel time savings, but due to the transfer from producers. The longer-term evaluation of the project confirms the poor viability of the investment both in financial and cost benefit terms.

Eurotunnel has in recent months been the focus of much media attention. In the Extraordinary General Meeting (EGM) of April 2004 the shareholders voted to replace the management with a new French-dominated Executive. Project DARE was launched in October 2004, with the aim to address the company's difficult situation. The developments over the next few months will be critical for Eurotunnel, given the approaching end of the Minimum Usage Charge (MUC) period in November 2006 and the start of the repayment of junior debt from 2007.

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#### 1. Scope

This paper describes the Channel Tunnel's (CT) turbulent past, from the problems encountered in the late 1950s, when the project was first seriously examined, through to today's traffic levels and financial viability issues. It highlights the troubles with the initial project proposals and compares the actual traffic levels with the historical forecasts. The financial and cost benefit appraisals draw on the analysis and comparison of costs and revenues and on the detailed welfare analysis.

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The historical sets of forecasts undertaken historically prior to and during the construction of the tunnel are presented. Moreover, this paper identifies the scale and effects of the large deviations in the forecasting exercises. It does not, however, deal with any potential methodological, original database, or other issues which may have affected the historical forecasts.

In terms of construction costs, it identifies the scale, sources and effects of the errors (with regards to project appraisal). It does not attribute or identify causes on the methodological, social or political aspects of the process.

The paper shows that the large debt accumulated by Eurotunnel is a consequence from the transfer from owners (or producers) to users. The current issues (shareholders revolt, changes of management and other legal battles) are actually about which producers—original shareholders, banks or even British and French taxpayers, should bear the debt burden.

### 2. Historical developments 1957-1986

The idea of a tunnel under the English Channel has been discussed for over 200 years. The first feasible plan is thought to have been devised by Albert Mathieu in 1802. He envisaged twin bored tunnels between Cap Gris Nez (near Calais) and Eastwell Bay (near Folkestone), remarkably similar to the present tunnel in terms of both design and location. The first attempt to construct a Channel Tunnel was by Colonel Beaumont in 1880, which the British Government—led by His Royal Highness George, Duke of Cambridge—halted to "avoid a new element of danger that would threaten our very national existence". These national security issues and the lack of adequate engineering techniques prevented the project from being taken forward for nearly a further 100 years (Slater and Barnett, 1957).

Within a context of immense growth in traffic between the UK and the Continent after the Second World War, and, more importantly, with the recognition that traffic would continue to grow in subsequent years, successive administrations during the 1960s agreed that the Channel Tunnel project was feasible and that the means to actually carrying it out should be fully examined.

Serious modern consideration of the construction of the CT commenced in 1957 when an Anglo-French Channel Tunnel Study Group was established. In 1960, an alternative Channel Bridge Study Group was set up in Paris. These submitted respective proposals in March 1960 and October 1961 for fixed links across the Channel. In November 1961 the Governments set up a joint official *Working Group of French and British Officials* to examine the proposals.

In July 1963 this working group reported in favour of a Channel Tunnel (MoT, 1963), and in July 1966, the French and British Prime Ministers announced the joint decision that subject to finding a solution for the construction work on mutually acceptable terms, the Tunnel should be built. However, none of the proposals received were considered acceptable. A new combined group presented revised proposals in 1970 and in March 1971 the British and French Ministers accepted the new scheme.

Arrangements for the financing and construction proceeded slowly. Following the publication of The Channel Tunnel White Paper (DoE, 1973), it was expected that a hybrid Bill would enable the Anglo-French treaty to be ratified by 1 January 1975.

However, the in-coming Labour Government decided to reassess the project and a Channel Tunnel Advisory Group (CTAG) was set up under Sir Alec Cairneross to report by Spring 1975. This implied that the Anglo-French Treaty could not be ratified by the agreed date of 1 January 1975. On 20 January 1975 the British Government conceded that the project had been abandoned; the UK had unilaterally withdrawn.

The project re-emerged in 1979 and in March 1980 the Government announced that it looked forward to receiving proposals for a tunnel or other fixed link across the Channel. A so-called UK-French Study Group published its report "Fixed Channel Link" in June 1982 (DoT, 1982) giving cautious support to the Tunnel alternative ahead of bridge, submerged tubes and hybrid proposals.

<sup>&</sup>lt;sup>1</sup> The British Army's Field Marshal Commander in Chief (His Royal Highness George, Duke of Cambridge) in a memorandum to the Secretary of State for War in Gladstone's Cabinet of 1882, as reported by Slater and Barnett (1957).

<sup>&</sup>lt;sup>2</sup> For a comprehensive account of the history of the Channel Tunnel from its very origins up until 1957, see Slater and Barnett (1957).

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