

6 On Indexed Product Summability of an Infinite Series

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6.1 INTRODUCTION

6.1.1 HISTORICAL BACKGROUND

Initially, in 1952, Szasz [10] published some results on products of summability methods. Subsequently, Rajgopal [7] in 1954, Parameswaran [6] in 1957, Ramanujan [8] in 1958, etc. published some more results on the products of summability methods. Later on, Das [2] in 1969 proved some related results on the absolute product summability. In 2008, Sulaiman [9] provided a result on the indexed product summability of an infinite series. The result found by Sulaiman was then extended by Paikray et al. [5] in 2010. Also, we can see some more developments on this idea in Ref. [1,3,4] in the recent past.

6.1.2 NOTATIONS AND DEFINITIONS

Let $\sum a_n$ be an infinite series with the sequence of partial sums $\{s_n\}$. Let $\{p_n\}$ be a sequence of positive real constants such that