

Harvestability Extensions

Dr. Tamás Nagy

Dr. Tamás Nagy

tamas@thel latent.space

Skeleton

Abstract

Harvestability Extensions — clean ProofEnv proof.

This paper presents 19 machine-verified theorems. All results are formally verified in the Platonic proof kernel (72 verification units, 53 proved statements) and exportable to Lean 4.

1. Introduction

2. Further Results

Theorem (effective_horizon_ge_own). *Effective Horizon Ge Own*. [Platonic: effective_horizon_ge_own, domain: harvestability_extensions]

Theorem (effective_horizon_selfish). *Effective Horizon Selfish*. [Platonic: effective_horizon_selfish, domain: harvestability_extensions]

Theorem (effective_horizon_increasing_in_delta). *Effective Horizon Increasing In Delta*. [Platonic: effective_horizon_increasing_in_delta, domain: harvestability_extensions]

Theorem (effective_horizon_full_bequest). *Effective Horizon Full Bequest*. [Platonic: effective_horizon_full_bequest, domain: harvestability_extensions]

Theorem (effective_horizon_nonneg). *Effective Horizon Nonneg*. [Platonic: effective_horizon_nonneg, domain: harvestability_extensions]

Theorem (effective_horizon_increasing_in_heir). *Effective Horizon Increasing In Heir*. [Platonic: effective_horizon_increasing_in_heir, domain: harvestability_extensions]

Theorem (effective_horizon_pos). *Effective Horizon Pos*. [Platonic: effective_horizon_pos, domain: harvestability_extensions]

Theorem (lifecycle_weight_nonneg). *Lifecycle Weight Nonneg*. [Platonic: lifecycle_weight_nonneg, domain: harvestability_extensions]

Theorem (lifecycle_weight_zero_kelly). *Lifecycle Weight Zero Kelly*. [Platonic: lifecycle_weight_zero_kelly, domain: harvestability_extensions]

Theorem (lifecycle_weight_zero_bayes). *Lifecycle Weight Zero Bayes*. [Platonic: lifecycle_weight_zero_bayes, domain: harvestability_extensions]

Theorem (lifecycle_weight_zero_safety). *Lifecycle Weight Zero Safety*. [Platonic: lifecycle_weight_zero_safety, domain: harvestability_extensions]

Theorem (lifecycle_weight_full_kelly). *Lifecycle Weight Full Kelly*. [Platonic: lifecycle_weight_full_kelly, domain: harvestability_extensions]

Theorem (learning_recovery). *Learning Recovery*. [Platonic: learning_recovery, domain: harvestability_extensions]

Theorem (samuelson_lifecycle_weight). *Samuelson Lifecycle Weight*. [Platonic: samuelson_lifecycle_weight, domain: harvestability_extensions]

Theorem (lifecycle_weight_le_kelly). *Lifecycle Weight Le Kelly*. [Platonic: lifecycle_weight_le_kelly, domain: harvestability_extensions]

Theorem (lifecycle_weight_nonneg_and_le_kelly). *Lifecycle Weight Nonneg And Le Kelly*. [Platonic: lifecycle_weight_nonneg_and_le_kelly, domain: harvestability_extensions]

Theorem (merton_recovery_lifecycle). *Merton Recovery Lifecycle*. [Platonic: merton_recovery_lifecycle, domain: harvestability_extensions]

Theorem (survival_exp_denom_pos). *Survival Exp Denom Pos*. [Platonic: survival_exp_denom_pos, domain: harvestability_extensions]

3. Stability Results

Theorem (lifecycle_weight_zero_harvestability). *Lifecycle Weight Zero Harvestability*. [Platonic: lifecycle_weight_zero_harvestability, domain: harvestability_extensions]

4. Proof Architecture

All proofs are implemented in the Platonic kernel (elysium/fields/harvestability_extensions/).

File	Role
harvestability_extensions_proof.py	

5. Discussion

References